

## PROGRAM SCHEDULE

### MONDAY, MARCH 30, 1998

#### PALEOPATHOLOGY ASSOCIATION FUNCTIONS

5:00 PM-7:00 PM      Registration  
Market St. Lobby

#### HUMAN BIOLOGY ASSOCIATION FUNCTIONS

6:00 PM-10:00 PM    Executive Committee Dinner/Meeting  
Executive A

### TUESDAY, MARCH 31, 1998

#### PALEOPATHOLOGY ASSOCIATION FUNCTIONS

8:00 AM-5:00 PM      Registration  
Market St. Lobby

8:00 AM-6:00 PM      Scientific Sessions  
Granary-Market St.

6:00 PM-8:00 PM      Cocktails and Dinner  
Harvest

#### HUMAN BIOLOGY ASSOCIATION FUNCTIONS

7:00 AM-9:00 AM      *Human Biology* Editorial Board Breakfast  
Executive A

8:00 AM-5:00 PM      Registration  
Seasons Lobby

7:30 AM-6:00 PM      Podium Sessions  
Seasons South

8:00 AM-6:00 PM      Poster Session  
Weights & Measures and Rap of the Gavel

8:00 PM-10:00 PM    Reception and Cash Bar  
Seasons North

### WEDNESDAY, APRIL 1, 1998

#### AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00 AM-5:00 PM      Executive Committee Meeting  
Executive A

WEDNESDAY, APRIL 1, 1998

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| 12:00 PM-8:00 PM | Registration<br>Seasons Lobby   |
| 12:00 PM-2:00 PM | <i>American Journal of Physical Anthropology</i> Editorial Board Luncheon<br>Executive B  |
| 6:00 PM-7:30 PM  | Workshop: "Funding Opportunities and Strategies for Physical Anthropologists," AAPA Career Development Committee, M.F. Teaford, Johns Hopkins University, and M.L. Weiss, Wayne State University<br>Executive B |
| 8:00 PM-10:00 PM | Reception and Cash Bar<br>3 Seasons-Seasons North   |

PALEOPATHOLOGY ASSOCIATION FUNCTIONS

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|-----------------|--------------------------------------|
| 8:00 AM-5:00 PM | Registration<br>Market St. Lobby     |
| 8:00 AM-6:00 PM | Scientific Sessions<br>Seasons North |
| 8:00 AM-5:00 PM | Poster Session<br>Smokehouse         |

HUMAN BIOLOGY ASSOCIATION FUNCTIONS

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|------------------|---|
| 8:00 AM-5:00 PM  | Registration<br>Seasons Lobby   |
| 7:00 AM-9:00 AM  | <i>American Journal of Human Biology</i> Editorial Board Breakfast<br>Executive B |
| 7:30 AM-4:30 PM  | Podium Sessions<br>Seasons South  |
| 8:00 AM-5:00 PM  | Poster Session<br>Weights & Measures and Rap of the Gavel                         |
| 12:00 PM-2:00 PM | Human Biology Association Annual Luncheon<br>Granary-Market St.                   |
| 5:00 PM-7:00 PM  | HBA Business Meeting<br>Seasons South   |

THURSDAY, APRIL 2, 1998  
FRIDAY, APRIL 3, 1998

**THURSDAY, APRIL 2, 1998**

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00 AM-5:00 PM	Registration Seasons Lobby
8:00 AM-5:00 PM	Poster Sessions and Books/Exhibits Harvest-Smokehouse; see below for details
8:00 AM-6:00 PM	Podium Sessions Seasons, Granary-Market St.; see below for details
5:30 PM-6:30 PM	Plenary Lecture: <i>Immoral Reflections: Chimpanzee Behavior and the Problem of Human Violence</i> , R.W. Wrangham, Harvard University Three Seasons

PRIMATE BIOLOGY AND BEHAVIOR INTEREST GROUP FUNCTIONS

6:30 PM-7:30 PM	Meeting Granary
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DENTAL ANTHROPOLOGY ASSOCIATION FUNCTIONS

6:30 PM-7:30 PM	Business Meeting Executive A
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AMERICAN ASSOCIATION OF ANTHROPOLOGICAL GENETICS

7:00 PM-8:00 PM	Business Meeting Market St.
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**FRIDAY, APRIL 3, 1998**

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS FUNCTIONS

8:00 AM-5:00 PM	Registration Seasons Lobby
8:00 AM-5:00 PM	Poster Sessions and Books/Exhibits Harvest-Smokehouse; see below for details
8:00 AM-6:00 PM	Podium Sessions Seasons, Granary-Market St.; see below for details

FRIDAY, APRIL 3, 1998

SATURDAY, APRIL 4, 1998

- 12:05 PM-2:00 PM      AAPA Luncheon. Speaker: M.F. Hammer, *Genetic Approaches to Modern Human Origins: Perspectives From the Y Chromosome*  
Three Seasons
- 8:00 PM-11:00 PM      AAPA Business Meeting  
Three Seasons

AMERICAN DERMATOGLYPHICS ASSOCIATION FUNCTIONS

- 5:30 PM-7:30 PM      Business Meeting  
Executive A

**SATURDAY, APRIL 4, 1998**

AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGISTS

- 8:00 AM-12:00 PM      Registration  
Seasons Lobby
- 8:00 AM-12:00 PM      Poster Sessions and Books/Exhibits  
Harvest-Smokehouse; see below for details
- 8:00 AM-6:00 PM      Podium Sessions  
Seasons, Granary-Market St.; see below for details
- 12:00 AM-1:00 PM      Open Forum: "Developing an AAPA Ethics Statement," L.D. Wolfe,  
East Carolina University, Greenville  
Executive A

THURSDAY, APRIL 2, 1998

SESSION 1

THURSDAY MORNING, APRIL 2, 1998

SESSION 1: GRANARY-MARKET ST.

*HUMAN BIOLOGICAL VARIATION I. CONTRIBUTED PAPERS.*

*Chair:* D. Brown, University of Hawaii, Hilo.

- 8:00 AM Preoperative anthropometric dysmorphology in sagittal synostosis. E.M. Salter, University of Texas, Dallas, J.C. Kolar, Columbia Craniofacial Center, Dallas.
- 8:15 A quantitative comparison of preoperative dysmorphology in metopic and sagittal synostosis. J.C. Kolar, Columbia Craniofacial Center, Medical City Dallas, E.M. Salter, University of Texas, Dallas.
- 8:30 Longitudinal study of anterior cranial base length in African American males with a comparison with European American males. E.R. Richardson, S.K. Malhotra, Meharry Medical College, Nashville, TN.
- 8:45 Segregation analysis reveals a major gene effect in compact and cancellous bone mineral density in two human populations. G. Livshits, D. Karasik, E. Kobylansky, Tel Aviv University, Israel, O.M. Pavlovsky, Moscow State University, Russia.
- 9:00 The effects of reproductive history upon post-menopausal bone mineral density and incidence of fracture frequency, location and type to distinguish between type I and type II osteoporosis in the Arizona Bone Density Study. A.K. Huxley, University of Arizona, Tucson.
- 9:15 What happens to infants who sleep with their parents? H.L. Ball, E. Hooker, University of Durham, UK.
- 9:30 Traumatic stress, cardiovascular disease, and the World War II incarceration of Japanese Americans: A first look. G.M. Jensen, University of Colorado, Denver.
- 9:45 INTERMISSION
- 10:00 Ethnic differences in the relationship between ambulatory blood pressure levels and body composition in young employed women. G.D. James, CVC, Cornell Medical College, NY.
- 10:15 Relative fat distribution among First Nation Canadians. P.T. Katzmarzyk, York University, Toronto, Ontario, R.M. Malina, Michigan State University, East Lansing.
- 10:30 The influence of acculturation and lifestyle change on the health of indigenous Siberians. W.R. Leonard, University of Florida, Gainesville, V.A. Galloway, University of Toronto, Ontario, E. Ivankine, University of Guelph, Ontario, L. Osipova, Russian Academy of Sciences, Novosibirsk.
- 10:45 An altered blood pressure course during pregnancy accompanies an increased incidence of preeclampsia at high altitude. S. Zamudio, D.A. Young, S.K. Palmer, L.G. Moore, University of Colorado Health Sciences and Denver Campus, Denver.

THURSDAY, APRIL 2, 1998

SESSION 1 / SESSION 2

- 11:00 Less altitude-associated birth weight decline in Tibetans than non-Tibetans in Tibet. L.G. Moore, T.S. Droma, S. Zamudio, University of Colorado at Denver and Health Sciences Center, Tibet Inst. Medical Sci., Lhasa, PRC.
- 11:15 Shape and size differences between Tibetan children in Tibet and China. S.M. Bailey, Tufts University, Medford, MA, X. Hu, Chengdu Institute of Sports, Chengdu, PRC.
- 11:30 The roles of gender and Tibetan ancestry in ventilation and ventilatory hypoxic responsiveness. L.S. Curran, L.G. Moore, University of Colorado, Denver.
- 11:45 Relationships between corpus callosum morphology and behavior in normal human females. P. T. Schoenmann, Center for Functional Imaging, Lawrence Berkeley National Laboratory, Berkeley, CA.

SESSION 2: SEASONS SOUTH

*PRIMATES I: PRIMATE BIOLOGICAL VARIATION. CONTRIBUTED PAPERS.*

- Chair:* M. Hamrick, Kent State University, Kent, OH.
- 8:00 AM Size, speed, and spinal kinematics in *Loris* and *Nycticebus*. L. Shapiro, University of Texas, Austin, B. Demes, State University of New York, Stony Brook.
- 8:15 Takeoff and landing forces of leaping prosimian primates. B. Demes, W.L. Jungers, J.G. Fleagle, State University of New York, Stony Brook.
- 8:30 Evolution of pads and claws in New World anthropoids. M.W. Hamrick, Kent State University, Kent, OH.
- 8:45 Postcranial morphometrics of the pygmy marmoset, *Cebuella pygmaea*. L.C. Davis, Southern Illinois University, Carbondale.
- 9:00 Relationship between prehensile tail anatomy and kinematics in two atelines. D. Schmitt, Duke University, Durham, NC, J.E. Turnquist, University of Puerto Rico, Medical Sciences Campus, San Juan, M.D. Rose, New Jersey Medical School, Newark, P. Lemelin, Northeastern Ohio Universities College of Medicine, Rootstown, OH.
- 9:15 Skeletal anatomy of African Papionins: Function, phylogeny or both? J.G. Fleagle, State University of New York, Stony Brook, W.S. McGraw, New York College of Osteopathic Medicine, Old Westbury, NY.
- 9:30 Forelimb posture during quadrupedal locomotion: Primates compared to nonprimates. S.G. Larson, State University of New York, Stony Brook, D. Schmitt, Duke University, Durham, NC, P. Lemelin, Northeastern Ohio Universities College of Medicine, Rootstown, OH, M. Hamrick, Kent State University, Kent, OH.
- 9:45 INTERMISSION
- 10:00 Finite element models of manual proximal phalanges in three modes of locomotion. B.G. Richmond, Smithsonian Institution, Washington, DC.

THURSDAY, APRIL 2, 1998

SESSION 2 / SESSION 3

- 10:15 Architectural correlates of locomotion in the hindlimb of two guenon species. N. Shahnoor, F. Anapol, University of Wisconsin, Milwaukee.
- 10:30 Gross morphology and bone density patterns of the knee joint in arboreal quadrupeds. K. Ahluwalia, State University of New York, Stony Brook.
- 10:45 Metacarpophalangeal joint morphology in non-human primates. M. Zylstra, University of Toronto, Ontario, Canada.
- 11:00 An integrative approach to hominoid forelimb elongation. P.L. Reno, C.O. Lovejoy, R.S. Meindl, Kent State University, Kent, OH, M.A. McCollum, Case Western Reserve University, Cleveland, OH.
- 11:15 Correlation of serial homologues in hominoids: Implications for the evolution of hominoid hands and feet. S.E. Inouye, Ohio University, Athens, C.O. Lovejoy, Kent State University, Kent, OH.
- 11:30 Methodological issues for gradient phenomena research. D. Swartz, New York University.
- 11:45 Surface remodeling of the chimpanzee subnasal region and its relevance to hominid craniofacial evolution. M.A. McCollum, Case Western Reserve University, Cleveland, OH.

SESSION 3: SEASONS NORTH

*PALEOPATHOLOGY I: THE BACKBONE OF HISTORY: HEALTH AND DISEASE IN THE WESTERN HEMISPHERE. SYMPOSIUM.*

Anthropologists, historians, and economists have long sought to measure and understand long-term trends in health and nutrition. The Western Hemisphere has been a contentious arena of debate, with a variety of claims having been made about the quality of life prior to 1492, the effects of contact and its aftermath, and the nature of change in perspective of the 19th and 20th centuries. This symposium reports the findings of numerous interdisciplinary research teams that have studied these questions by assembling skeletal data using the same coding format on more than 12,500 individuals who were Native Americans, Euro-Americans, or African-Americans and who lived in North, Central, or South America from ca. 4000 B.C. to the early 20th century. An additional innovation is a preliminary formulation of an index for ranking the health of populations based on skeletal data.

*Organizers*

*and Chairs:* R.H. Steckel, Ohio State University, Columbus, and J.C. Rose, University of Arkansas, Fayetteville.

- 8:00 AM Health and nutrition in the Western Hemisphere: An introduction. J.C. Rose, University of Arkansas, Fayetteville.
- 8:15 Paleodemography: Research findings and methodological implications from an analysis of more than thirty Western Hemisphere skeletal populations. R. McCaa, University of Minnesota, Minneapolis.
- 8:30 A health index from skeletal remains. R.H. Steckel, Ohio State University, Columbus, J.C. Rose, University of Arkansas, Fayetteville, P. Sciulli, Ohio State University, Columbus.

THURSDAY, APRIL 2, 1998

SESSION 3

- 8:45 The biology of poverty: Skeletal and documentary evidence from the Monroe County Poorhouse. R.L. Higgins, State University of New York, Potsdam, L. Walsh, Colonial Williamsburgh Foundation, Severna Park, MD, M. Haines, Colgate University, Hamilton, NY, J.E. Sirianni, University at Buffalo, NY.
- 9:00 Historical, demographic and skeletal studies of a nineteenth century Canadian church cemetery. S. Saunders, L. Sawchuk, D. Herring, R. Hoppa, S. Klepp, McMaster University, Hamilton, Ontario.
- 9:15 African-American biohistory: Relative rankings in the Health and Human History Project. T.A. Rathbun, University of South Carolina, R. Steckel, Ohio State University, K. Condon, Florida International University, T.A. Crist, Temple University.
- 9:30 Biohistory of health and behavior in the Georgia Bight. C.S. Larsen, University of North Carolina, Chapel Hill, A.W. Crosby, University of Texas, Austin, M.C. Griffin, Moorhead State University, MN, D.L. Hutchinson, East Carolina University, Greenville, NC, C.B. Ruff, M.F. Teaford, Johns Hopkins University, Baltimore, MD, K.F. Russell, University of Massachusetts, Dartmouth, M.J. Schoeninger, University of Wisconsin, Madison, L.E. Sering, University of Michigan, Ann Arbor, S.W. Simpson, Case Western Reserve University, Cleveland, OH.
- 9:45 Temporal trends in health indicators among Ohio Valley Native Americans. N.E. Tatarek, P.E. Sciuilli, Ohio State University, Columbus.
- 10:00 INTERMISSION
- 10:15 Health, nutrition and demographic change in native California. R. Thornton, University of California, Los Angeles, P.L. Walker, University of California, Santa Barbara.
- 10:30 The American Southwest: Living on the edge of existence. D.L. Martin, Hampshire College, Amherst, MA, A.L.W. Stodder, Field Museum of Natural History, Chicago, IL, A.H. Goodman, Hampshire College, D. Reff, Ohio State University, Columbus.
- 10:45 Skeletal evidence for health in ancient Ecuador. D.H. Ubelaker, Smithsonian Institution, Washington, DC, L. Newson, King's College London, UK.
- 11:00 Complex societies and social disruption: What skeletons reveal about Mesoamerican prehistory. R. Storey, University of Houston, TX, L. Marquez Morfin, ENAH, Col. Isidro Fabela, Mexico.
- 11:15 Economy, nutrition and disease in southern, coastal Brazil. V.W. De Aguiar, W.A. Neves, Instituto de Biociencias, Universidade de Sao Paulo, Brazil.
- 11:30 Discussant. G. Armelagos, Emory University, Atlanta, GA.
- 11:45 Discussant. The backbone of history: An historian's perspective. P.D. Curtin, Johns Hopkins University, Baltimore, MD.



## SESSION 4: THREE SEASONS

*PALEOANTHROPOLOGY I: HOMINID EVOLUTION—EARLY HOMINIDS. CONTRIBUTED PAPERS.*

- Chair:* F. Spoor, University College London, UK.
- 8:00 AM Semicircular canal size and upright stance: A comparative perspective. R.B. Eckhardt, A.H. Hildebrand, Pennsylvania State University, University Park.
- 8:15 What do carotid canals tell us about human brain evolution? J. Braga, J.J. Hublin, Musée de l'Homme, Paris, France.
- 8:30 Endocranial capacity of Stw 505 ('Mr. Ples'), a large new hominid cranium from Sterkfontein. G. Conroy, A. Kane, Washington University, St. Louis, MO, H. Seidler, G. Weber, University of Vienna, Austria, P. Tobias, University of the Witwatersrand, Johannesburg, South Africa.
- 8:45 Rethinking the evolution of the human hand. J.C. Ohman, University of Liverpool, UK, R.P. Mensforth, Cleveland State University, OH.
- 9:00 Hand function and tool behavior in early hominids. R.L. Susman, State University of New York, Stony Brook.
- 9:15 Laetoli Hominid 21: Comparative study of the morphology of the ulna. P.S. Kyauka, San Francisco State University, CA.
- 9:30 False impressions from the Laetoli hominid footprints. R.H. Tuttle, C. Musiba, University of Chicago, IL, D.M. Webb, Kutztown University, PA.
- 9:45 Multivariate estimations of body length in humans, African apes and fossil hominids. S.M. Hens, University of Tennessee, Knoxville.
- 10:00 INTERMISSION
- 10:15 A new technique for estimating sexual dimorphism in samples of unknown sex. S.-H Lee, University of Michigan, Ann Arbor.
- 10:30 Morphological integration in the hominid cranial base: Implications for early hominid phylogeny. D.S. Strait, George Washington University, Washington, DC.
- 10:45 Masticatory characters and primate phylogeny estimation. B. Wood, M. Collard, George Washington University, Washington, DC., University College, London.
- 11:00 Cladistics and the estimation of hominid phylogeny. M. Collard, B. Wood, University College, London, George Washington University, Washington, DC.
- 11:15 On variability and the choice of model populations in the taxonomic assessment of early fossil hominids. R. Rogers Ackermann, Washington University, St. Louis, MO.
- 11:30 The systematic position of Stw 183, an adolescent maxilla from Sterkfontein. C.A. Lockwood, Institute of Human Origins, Palaeo-anthropology Research Group, Wits Medical School, Parktown, South Africa, J. Moggi-Cecchi, Palaeo-anthropology Research Group, Wits Medical School, Parktown, South Africa.

- 11:45 New postcranial fossils of *Australopithecus afarensis* from Hadar, Ethiopia. C.V. Ward, M.S. Drapeau, University of Missouri, Columbia, W.H. Kimbel, D.C. Johanson, Arizona State University, Tempe.

## SESSION 5: HARVEST-SMOKEHOUSE

*PALEOANTHROPOLOGY II: PRIMATE EVOLUTION AND GENERAL  
PALEOANTHROPOLOGY. POSTERS.*

*Chair:* S. Leigh, University of Illinois, Urbana.

*Times:* 8:00-8:30 AM Poster set-up.  
8:30-10:00 AM Authors of even-numbered posters present for questions.  
10:30 AM-12:00 PM Authors of odd-numbered posters present for questions.  
12:00-12:30 PM Poster take-down.

1. Dental evidence for cheirogaleid affinities. E.C. Kirk, B.A. Williams, Duke University, Durham, NC.
2. The smallest primate? D.L. Gebo, Northern Illinois University, DeKalb, M. Dagosto, Northwestern University, Chicago, K.C. Beard, Carnegie Museum, Pittsburgh, PA, T. Qi, Academia Sinica, Beijing, China.
3. New fossil specimens of *Branisella boliviana*: Evidence for a primitive platyrrhine. M. Takai, Kyoto University, Japan, F. Anaya, Museo Nacional de Ciencia Naturales, La Paz, Bolivia, N. Shigehara, T. Setoguchi, Kyoto University, Japan.
4. A new fossil platyrrhine femur from the Pinturas Formation of Argentina. N.J. Stevens, J.G. Fleagle, State University of New York, Stony Brook.
5. Evidence for a tail in *Proconsul heseloni*. T. Harrison, New York University, NY.
6. Comparative study of East African Pliocene omnivore dental microwear. L.C. Bishop, T. King, University of Liverpool, UK, Natural History Museum, London, B. Wood, George Washington University, Washington, DC.
7. Phylogenetic relationships and functional morphology of the distal humerus from Kanapoi, Kenya. E.W. Baker, A.A. Malyango, T. Harrison, New York University, NY.
8. Metacarpals of *Australopithecus afarensis*: Locomotor implications of cross-sectional geometry. K.E. Coffing, University of California, Los Angeles.
9. Ontogeny of human and African ape distal tibia: Implications for the evolution of bipedality. C.A. Kunos, S.W. Simpson, B. Latimer, Case Western Reserve University, Cleveland Museum of Natural History, OH.
10. The locomotion of *Australopithecus afarensis*: A dynamic analysis and comparison with modern humans. P.A. Kramer, University of Washington, Seattle.
11. The determinants of hominid walking speed. C.E. Hilton, University of New Mexico, Albuquerque.

12. The cerebellum in hominid evolution: Evidence from endocranial casts. D.D. White, State University of New York, Albany.
13. An analysis of craniofacial variation in *Homo erectus* from Africa and Asia using hominoid analogs. B.A. Villmoare, Arizona State University, Tempe.
14. The degree and nature of sexual dimorphism in *Homo erectus*: A comparison of the partial hipbones of OH 28 and KNM-ER 3228. G.C. Cabana, University of Michigan, Ann Arbor.
15. The cranial base of the Ngandong hominids: Implications for modern human origins. A.C. Durband, University of Tennessee, Knoxville.
16. Reconstruction and analysis of the Le Moustier 1 skull using CT-data. J.L. Thompson, University of Toronto, Ontario, Canada, B. Illerhaus, Bundesanstalt für Material-forschung und-Prufung, Unter den Eichen, Berlin, Germany.
17. Condylar region morphology in Neandertal mandibles: Issues of ontogeny, homology, and interpretation. R.S. Jabbour, City University of New York, G.D. Richards, University of California, Berkeley.
18. The angle of the Neandertal *sulcus processus zygomaticus* and masticatory muscle function. T.L. Estenson, J.Y. Anderson, University of New Mexico, Albuquerque.
19. Shape variation of the human pollical distal phalanx. S.L. Smith, University of Texas, Arlington.
20. A fuzzy discriminant approach to assessing the taxonomic affinity of the Tabun C2 mandible: Neandertal or modern human? C.M. Willermet, Arizona State University, Tempe, R.M. Quam, State University of New York, Binghamton.
21. A test of the two species hypothesis in the Levant using a cluster analysis of mandibular measurements. W.L. Moore, University of Tennessee, Knoxville.
22. The morphometric relationship of Upper Cave 101 to modern *Homo sapiens*: An unweighted analysis. D.L. Cornell, R.L. Jantz, University of Tennessee, Knoxville.

## SESSION 6: HARVEST-SMOKEHOUSE

*HUMAN BIOLOGICAL VARIATION II: DEMOGRAPHY AND REPRODUCTION. POSTERS.*

*Chair:* B. Strassman, University of Michigan, Ann Arbor.

<i>Times:</i>	8:00-8:30 AM	Poster set-up.
	8:30-10:00 AM	Authors of even-numbered posters present for questions.
	10:30 AM-12:00 PM	Authors of odd-numbered posters present for questions.
	12:00-12:30 PM	Poster take-down.

23. Biobehavioral determinants of postpartum maternal nutritional status for nomadic Turkana women of Kenya. I.L. Pike, Ohio State University, Columbus.

THURSDAY, APRIL 2, 1998

SESSION 6 / SESSION 7

24. Inter and intra-population variation in the pattern of male testosterone by age. P.T. Ellison, S.F. Bribiescas, Massachusetts General Hospital, Boston, G.R. Bentley, Cambridge University, UK, B.C. Campbell, Northwestern University, Evanston, IL, C. Panter-Brick, Durham University, UK.
25. Measuring 'rates' of follicular atresia: A cautionary tale. L.R. Godfrey, L.E. Leidy, M.R. Sutherland, University of Massachusetts, Amherst.
26. Mother's helper: Girls' contribution to domestic work among the Toba. R.M. Bove, C. Vallengia, P.T. Ellison, Harvard University, Cambridge, MA.
27. Optimal birth spacing in a 19th century Mennonite community. D.A. St. George, J.C. Stevenson, P.M. Everson, L.M. Tedrow, Western Washington University, Bellingham.
28. A comparison of mortality in a native and immigrant community in southwestern Hungary. T.A. Koertvelyessy, Ohio University, Athens.

THURSDAY AFTERNOON, APRIL 2, 1998

SESSION 7: GRANARY-MARKET ST.

*SKELETAL BIOLOGY I: CONTRIBUTED PAPERS.*

- Chair:* U. Iwaniec, Creighton University, Omaha, NE.
- 1:00 PM The interface between muscle and bone: Biomechanical implications. J. Hirschberg, N. Milne, C.E. Oxnard, University of Western Australia.
- 1:15 The effects of physical fitness on the structure of long bone diaphyses: A study of U.S. female Marine recruits. K. Aldridge, C.B. Ruff, T.J. Beck, Johns Hopkins University School of Medicine, Baltimore, MD.
- 1:30 Oral and postcranial bone-loss patterns at 1-year recall. C.F. Hildebolt, M. Dotson, N. Yokoyama-Crothers, J. Muckerman, T.K. Pilgram, J. Hauser, S. Cohen, E. Kardaris, M. Vannier, R. Civitelli, Washington University, St. Louis, MO, J. Hanes, M. Shrout, Medical College of Georgia, Augusta.
- 1:45 Surface strain gradients in alveolar bone. D.J. Daegling, J.B. Rossie, Yale University, New Haven, CT.
- 2:00 Selecting a calibration method to reduce bias in histological aging methods. N.L. Rogers, University of Tennessee, Knoxville, S.D. Stout, University of Missouri, Columbia.
- 2:15 Age, activity, and musculoskeletal stress markers. B.L.B. Nagy, Arizona State University, Tempe.
- 2:30 Patterns of cortical bone remodeling in Inuit and Pueblo agriculturalists. U.T. Iwaniec, T.D. Crenshaw, M.J. Schoeninger, University of Wisconsin, Madison, S.D. Stout, University of Missouri, Columbia, M.F. Ericksen, George Washington University, Washington DC.

THURSDAY, APRIL 2, 1998

SESSION 7 / SESSION 8

- 2:45 The effect of osteon size and age at death on bone remodeling in ancient Nubia. K.F. Trivers, Emory University, Atlanta, GA.
- 3:00 INTERMISSION
- 3:15 Anthropometric characteristics of infants with cranial deformities. M.J. Norton, California State University, Long Beach.
- 3:30 A survey of skeletal remodeling in the mammalian skeleton: A pilot study. R.A. Walker, New York Chiropractic College, Seneca Falls, NY.
- 3:45 Asymmetry and sexual dimorphism in the human appendicular skeleton. T.E. Lancaster, Louisiana State University, Baton Rouge.
- 4:00 Growth as a measure of environmental stress in an agricultural and a pre-industrial community from Medieval England. M.E. Lewis, C.A. Roberts, University of Bradford, UK.
- 4:15 Capturing data from three-dimensional surfaces using fuzzy landmarks. C.J. Valeri, T.M. Cole III, S. Lele, J.T. Richtsmeier, Johns Hopkins University, Baltimore, MD.
- 4:30 Variation in the closure of the sacral canal in the skeletal sample from Pompeii, Italy, 79 AD. R.J. Henneberg, M. Henneberg, University of Adelaide, Australia.
- 4:45 Metric analysis of sexual dimorphism in the Thai tibia. C.A. King, University of Hawaii, Honolulu, M.Y. Iscan, Boca Raton, FL, S.R. Loth, University of Pretoria, South Africa.

SESSION 8: SEASONS SOUTH

*PRIMATES II: PRIMATE BIOLOGICAL VARIATION. CONTRIBUTED PAPERS.*

- Chair:* J. E. Phillips-Conroy, Washington University, St. Louis, MO.
- 1:00 PM Tooth root morphology and diet in primates. M.A. Spencer, Duke University Medical Center, Durham, NC.
- 1:15 Polymorphic aspects of canine honing among Old World anthropoid males. A. Washburn, Temple University, Philadelphia, PA.
- 1:30 Masticatory form and function in gorillas (*Gorilla gorilla gorilla* & *G. g. beringei*). A.B. Taylor, Samuel Merritt College, Oakland, CA.
- 1:45 The diet of extant hominoids as reflected in 2-D molar occlusal morphology. E.J. Smith, University of Toronto, Ontario, Canada.
- 2:00 Craniofacial and body mass dimorphism in anthropoid primates. J.M. Plavcan, New York College of Osteopathic Medicine, Old Westbury.
- 2:15 Craniometric variation and selection in an *Alouatta palliata* population. A.L. Jones, University of California, Davis, D. Degusta, S.P. Turner, C.J. Campbell, K. Milton, University of California, Berkeley.

- 2:30 Morphological differentiation of gorilla subspecies. S.R. Leigh, University of Illinois, Urbana, J.H. Relethford, State University of New York, Oneonta, C.P. Groves, Australian National University, Sydney.
- 2:45 Left-right asymmetries in the temporoparietal intrasylvian cortex of common chimpanzees. E. Gilissen, California Institute of Technology, Pasadena, K. Amunts, Vogt Institute, Dusseldorf, Germany, G. Schlaug, Beth Israel Deaconess Med Ctr, Boston, K. Zilles, Vogt Institute, Dusseldorf, Germany.
- 3:00 INTERMISSION
- 3:15 When did sexual dimorphism appear in the brain's interhemispheric highway? D.C. Broadfield, City University of New York, The Mount Sinai School of Medicine, NY, R.L. Holloway, Columbia University, NY, P.J. Gannon, The Mount Sinai School of Medicine, NY, M. Yuan, Columbia University, NY, J.T. Laitman, City University of New York, The Mount Sinai School of Medicine, NY.
- 3:30 The evolution of sex-biased mortality: Testing theories with diverse Strepsirrhine social systems. J.H. Jones, Harvard University, Peabody Museum, Cambridge, MA.
- 3:45 The evolutionary significance of growth to weaning among primates. P.C. Lee, University of Cambridge, UK.
- 4:00 Reproductive life history variation in macaques. W.C. Hartwig, San Francisco College of Osteopathic Medicine, CA.
- 4:15 Differences in cortisol levels of anubis and hamadryas baboons captured in the Awash National Park, Ethiopia. P.E. Reed, Tufts University School of Veterinary Medicine, Grafton, MA, J.E. Phillips-Conroy, Washington University School of Medicine, St. Louis, MO, C.J. Jolly, New York University, NY, S.K. Wasser, University of Washington School of Medicine & Center for Wildlife Conservation, Seattle, WA.
- 4:30 Sensitivity of stable isotopes in bone to dietary specialization and niche separation of primates in Kibale Forest, Uganda. M.L. Carter, Illinois State Museum, Springfield.
- 4:45 Chimpanzee stable isotope data in hair: Diet selectivity and habitat use. M.J. Schoeninger, University of Wisconsin, Madison, J. Moore, University of California at San Diego, La Jolla, J.M. Sept, Indiana University, Bloomington, J. Casamajor, University of Wisconsin, Madison.
- 5:00 Sex differences in tissue composition in female and male *Pan paniscus* with comparison to other hominoids. R. K McFarland. A. L. Zihlman, University of California, Santa Cruz.

## SESSION 9: SEASONS NORTH

*PALEOANTHROPOLOGY III: CURRENT FINDINGS ON MAMMALIAN, PRIMATE, AND HUMAN BRAIN EVOLUTION: A SYMPOSIUM IN HONOR OF HARRY J. JERISON. SYMPOSIUM.*

Harry Jerison's seminal research forms the basis of departure for the oral presentations in this symposium, which represent vertebrate, mammalian, primate, and hominid brain evolution. The first seven presentations focus on vertebrate (especially mammalian) brain evolution and encompass the classic and interrelated themes of olfaction, animal intelli-

gence, cortical organization, development, and physiology. The second part centers on primates. Themes include brain lateralization, the application of magnetic resonance imaging to brain evolution studies, and specifics of higher primate brain evolution. In addition to celebrating Jerison's contributions, the symposium offers physical anthropologists—and other participants—an opportunity to learn about the most recent developments in the field of brain evolution.

*Organizers*

*and Chairs:* D. Falk, State University of New York, Albany, K. Gibson, University of Texas, Houston.

- 1:00 PM From nose to brain. B.A. Chiarelli, University of Florence, Italy.
- 1:15 Animal intelligence: A three-ring circus. W. Hodos, University of Maryland, College Park.
- 1:30 The discovery of cerebral diversity: An inconvenient scientific revolution. T.M. Preuss, University of Southwestern Louisiana, LA.
- 1:45 Evolutionary 'progress' or adaptation? Regulation of neuronal numbers has profound downstream effects: Development as a towrope in evolution. H.J. Karten, University of California at San Diego, La Jolla.
- 2:00 Encephalization and its developmental structure: How many ways can a brain get big? B.L. Finlay, M.N. Hersman, R.B. Darlington, Cornell University, Ithaca, NY.
- 2:15 The Expensive Tissue Hypothesis revisited. L.C. Aiello, N. Bates, University College London, UK, T. Joffe, George Washington University, Washington, DC.
- 2:30 Primate brain evolution: The maternal contribution. R.D. Martin, Anthropological Institute, University of Zurich, Switzerland.
- 2:45 INTERMISSION
- 3:00 Asymmetries in cerebrocortical language area homologs of non-human primates. P.J. Gannon, Mount Sinai School of Medicine, New York.
- 3:15 Advances in the study of hominoid brain evolution: Magnetic Resonance Imaging (MRI), and 3D reconstruction. K. Semendeferi, University of California at San Diego, La Jolla.
- 3:30 Revisiting australopithecine visual striate cortex: Newer data from chimpanzee and human brains. R.L. Holloway, Columbia University, D. Broadfield, City University of New York, M. Yuan, Columbia University, NY.
- 3:45 Bigger is better: Primate brain size in relationship to cognition. K.R. Gibson, University of Texas, Houston, D. Rumbaugh, Georgia State University, Atlanta, R. Byrne, University of St. Andrews, Scotland.
- 4:00 Relative brain size in men and women: An evolutionary perspective. D. Falk, N. Froese, State University of New York, Albany.
- 4:15 The brain as a great unraveled knot: Using poetic metaphors to 'understand' how the brain works, what it does, and how it evolved. W. Welker, University of Wisconsin, Madison.



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SESSION 9 / SESSION 10A / SESSION 10B

4:30 Brain evolution in hominids: Are we at the end of the road? M.A. Hofman, Netherlands Institute for Brain Research, Amsterdam.

4:45 Discussant. H.J. Jerison, University of California, Los Angeles.

SESSION 10A: THREE SEASONS

*FORENSIC ANTHROPOLOGY I: CONTRIBUTED PAPERS.*

*Chair:* A. Galloway, University of California, Santa Cruz.

1:00 PM Biocultural analysis of a forensic dental collection. M.Y. Isçan, Boca Raton, FL, S.R. Loth, University of Pretoria, South Africa, E.N. L'Abbe, Florida Atlantic University, Boca Raton.

1:15 Morphometric segregation of commingled remains using the femoral head and acetabulum. M.R. London, D.R. Hunt, National Museum of Natural History, Smithsonian Institution, Washington, DC.

1:30 The recovery of skeletal remains of U.S. war casualties and the effect of cultural practices. R.F. Pastor, United States Army Central Identification Laboratory, Hickam Air Force Base, HI.

1:45 Assessment of error and bias in age estimation. A.H. McKeown, N.P. Herrmann, L. Meadows Jantz, University of Tennessee, Knoxville.

2:00 Forensic photograph/live subject comparisons: Application of appropriate statistical tests. R.A. Halberstein, L.L. Taylor, University of Miami, Coral Gables, FL.

2:15 A test of accuracy of techniques used to determine sex in the mandible. E.K. Muller, Louisiana State University, Baton Rouge.

SESSION 10B: THREE SEASONS

*HUMAN BIOLOGICAL VARIATION III: CONTRIBUTED PAPERS.*

*Chair:* N. Cameron, Loughborough University, UK.

3:00 Fourier analysis as a quantitative descriptor of joint angles in various forms of human locomotion. D. Webb, Kutztown University, PA, W.A. Sparrow, Deakin University, Burwood, Victoria, Australia.

3:15 Have male offspring in urban Taiwan benefited disproportionately from recent socioeconomic and demographic changes? B. Floyd, University of Oregon, Eugene.

3:30 Participatory action research: Effectiveness of a student-led fruit and vegetable stand in an urban Philadelphia middle school. P. Gordon-Larsen, F.E. Johnston, T. Dubowitz, D. Gerber, University of Pennsylvania, Philadelphia.

3:45 Body fat and pubertal development in rural African adolescent females. N. Cameron, Loughborough University, UK, B. Getz, Pretoria University, South Africa.



- 4:00 Associations between serum leptin, body composition and maturation from pre- to post-puberty. E.W. Demerath, B. Towne, W. Wisemandle, R.M. Siervogel, Wright State University School of Medicine, Dayton, OH.
- 4:15 Growth of adolescent Chakesang Naga girls of north-east India. R.K. Pathak, North-Eastern Hill University, Shillong, India, P.S. Gill, University of Cincinnati Medical Center, OH.
- 4:30 Fetal growth spurts: Fact and fiction regarding the fetal growth curve. M. Lampl, Emory University, Atlanta, GA, I.M. Bernstein, University of Vermont Medical School, P. Jeanty, Vanderbilt Medical School, D. Walrath, University of Pennsylvania, Philadelphia.

## SESSION 11: HARVEST-SMOKEHOUSE

*SKELETAL BIOLOGY II: POSTERS.*

*Chair:* L.W. Konigsberg, University of Tennessee, Knoxville.

*Times:* 1:00-1:30 PM Poster set-up.  
 1:30-3:00 PM Authors of even-numbered posters present for questions.  
 3:30-5:00 PM Authors of odd-numbered posters present for questions.  
 5:00-5:30 PM Poster take-down.

1. Virtual multimedia examinations: Integrating images, video, and animations into an interactive testing program. J. Kappelman, C. Bramblett, A. Gordon, K. McCardel, T. Ryan, R. Scott, E. Seiffert, G. Weiner, University of Texas, Austin.
2. Sex and death in the ancient world: Comparing paleodemographic and inscriptional data. R.R. Paine, University of Utah, Salt Lake City, G.R. Storey, University of Iowa, Iowa City, J.L. Boldsen, University of Odense, Denmark.
3. What were they doing? Reconstructing Stone-Age life at Ajvide, a burial ground on the island of Gotland in the Baltic. P. Molnar, Stockholm University, Sweden.
4. The average preservation index: Methodology and application on a Florida wet site. C.M. Stojanowski, University of New Mexico, Albuquerque, R.M. Seidemann, Louisiana State University, Baton Rouge.
5. Subadult growth in an ancient Nubian population: A population-specific analysis. J.S. Richtsmeier, D.P. Van Gerven, University of Colorado, Boulder.
6. Bone remodeling in a Medieval Nubian population: A comparison of the rib and femur. D.M. Mulhern, Colorado College, Colorado Springs.
7. Tetracycline labeling in an ancient Nubian X-group (24-I-3) population. J.A. Cook, Emory University, Atlanta, GA.
8. Skeletal maturation and environmental stress in ancient Nubian teenagers and young adults. A.M. Albert Baptista, University of North Carolina, Wilmington, D.P. Van Gerven, University of Colorado, Boulder.

9. Quantification and extraction of tetracycline in ancient Nubian bone from the X-Group Period (350-550 CE). K.L. Kohlbacher, State University of New York, Binghamton, K. Roux, G.J. Armelagos, Emory University, Atlanta, GA.
10. Mortuary and skeletal analysis of the remains of Bir el Djebbana. E. Pennefather-O'Brien, Indiana University, Bloomington, E. MacDonald, Classics and Religion Studies, University of Ottawa, Ontario.
11. Human remains as offerings at four Maya centers. D.B.S. Maxwell, Statistical Research, Inc., Redlands, CA, University of Arizona, Tucson.
12. Isotopic evidence for paleodiet in Michigan. K.L. Brandt, State University of New York, Albany.
13. Prehistoric human subsistence in tropical Southeast Asia: Isotopic evidence from Niah Cave. J.S. Krigbaum, New York University, NY.
14. Morphological evidence for cold adaptation in pre-Contact Andean skeletons from high altitudes. K.J. Weinstein, University of Florida, Gainesville.
15. Activity-related sexual dimorphism and prehistoric subsistence strategies in the American Midwest. T.L. Cadiente, B.L.B. Nagy, Arizona State University, Tempe.
16. Sexual dimorphism: Transitions between hunter-gatherer, agricultural, and contemporary societies. A.H. Ross, L.E. Flourney, University of Tennessee, Knoxville.
17. A biocultural overview of the W. Montague Cobb Skeletal Collection: Towards a biological and social history of a late 19th to mid 20th century urban population. R.J. Watkins, University of North Carolina, Chapel Hill.
18. A possible historic case of gender role reversal. D. Smay, A. Galloway, University of California, Santa Cruz, R.T. Mason, Office of the Sheriff-Coroner, Santa Cruz, CA.

## SESSION 12A: HARVEST-SMOKEHOUSE

*FORENSIC ANTHROPOLOGY II: POSTERS.*

*Chair:* D.L. Hutchinson, East Carolina University, Greenville, NC.

*Times:* 1:00-1:30 PM Poster set-up.  
 1:30-3:00 PM Authors of even-numbered posters present for questions.  
 3:30-5:00 PM Authors of odd-numbered posters present for questions.  
 5:00-5:30 PM Poster take-down.

19. The reliability of composite portraits in forensic-anthropology: The death-mask of Napoleon 1st (1769-1821). P-F. Puech, H. Albertini, Musée de l'Homme, Nimes, France.
20. Variation in bifidity of cervical spinous processes: Potential forensic applications. S.M. Duray, H.B. Morter, Palmer College of Chiropractic, Davenport, IA, F.J. Smith, Wayne College, Orrville, OH.

21. A nonparametric analysis of the demographic representivity of the Maxwell Museum's Documented Skeletal Collection. E.A. Carson, University of New Mexico.
22. Markers of childbirth? Effect of body size and pubic morphological change. A. Galloway, University of California, Santa Cruz, J.J. Snodgrass, University of Florida, Gainesville, J. Suchey, California State University, Fullerton and Coroner's Office, County of Los Angeles, CA.
23. Using cranial vault thickness to estimate age in fetal skeletons. W.N. Duncan, Southern Illinois University, Carbondale.
24. Domestic assault: Soft tissue and skeletal manifestations. S.A. Novak, University of Utah, Salt Lake City.

## SESSION 12B: HARVEST-SMOKEHOUSE

*PALEOPATHOLOGY II: POSTERS.*

*Chair:* D.L. Hutchinson, East Carolina University, Greenville, NC.

*Times:* 1:00-1:30 PM Poster set-up.  
 1:30-3:00 PM Authors of even-numbered posters present for questions.  
 3:30-5:00 PM Authors of odd-numbered posters present for questions.  
 5:00-5:30 PM Poster take-down.

25. Clues to recognition of kidney disease in archeologic record. C. Rothschild, B.M. Rothschild, Arthritis Center of Northeast Ohio, Youngstown, I. HersHKovitz, Tel Aviv University, Israel.
26. Anthropologic perspective of hyperostosis frontalis interna. C.M. Greenwald, L. Jellema, Cleveland Museum of Natural History, OH, I. HersHKovitz, Tel Aviv University, Israel, O. Dutour, Université de la Méditerranée, Marseille, France, B.M. Rothschild, Arthritis Center of Northeast Ohio, Youngstown.
27. Histological and roentgenological characteristics of periosteal new bone formation—an aid to diagnosis of pathology in archaeological bone. D.A. Weston, University College London, UK.
28. Prehistoric microcephaly from Michigan. R.G. Wilkinson, M.V. Gallo, State University of New York, Albany.
29. Bioarchaeological analysis of human skeletal remains at Utatlan, Guatemala: Evidence for human sacrifice. M.C. Solano, State University of New York, Albany.
30. A scalloped trophy bone from an Epiclassic site in the Malpas Valley, Zacatecas, Mexico. D. To, Arizona State University, Tempe.
31. General health among an early prehistoric population on the Gulf Coast of Mexico. T.L. Jolly, University of Illinois, Urbana, A.L. Grauer, Loyola University, Chicago.

THURSDAY, APRIL 2, 1998

FRIDAY, APRIL 3, 1998

SESSION 12B / SESSION 13

32. Bioarchaeological analysis of patterns of health and disease at the Garbacon Creek site (31Cr86), coastal North Carolina. A.M. Kakaliouras, University of North Carolina, Chapel Hill.
33. Oral pathology in a southeastern Mississippian period site. M.D. Hamilton, M.K. Marks, University of Tennessee, Knoxville.
34. Mortuary practices and paleopathological analyses of early northeastern Illinois peoples. M.R. Buzon, A.L. Grauer, Loyola University, Chicago, IL.
35. Analysis of the Taylor Farm site (ca. A.D. 950-1670): Pitfalls of curation and paleopathological possibilities. E.M. McNamara, T.L. Jolly, University of Illinois, Urbana, A.L. Grauer, Loyola University, Chicago.
36. A preliminary assessment of human skeletal remains of slaves from Newton Plantation, Barbados, West Indies. K.S. Herndon, Southern Illinois University, Carbondale.
37. Pathology at the Hampstead Hill site: Health in an early 19th century U.S. population. A.M. Lubensky, C.B. Ruff, M.F. Teaford, Johns Hopkins University School of Medicine, Baltimore, MD.
38. Vertebral pathology from a Byzantine Judean monastery. S.E. Niebuhr, Indiana University, Bloomington, S.G. Sheridan, University of Notre Dame, IN.
39. Association between degenerative joint disease of the hands and pottery manufacturing in the prehistoric population of Khok Phanom Di, Thailand. K.M. Domett, University of Otago, Dunedin, New Zealand.
40. Subadult skeletal pathology at a prehistoric site on Taumako Island, Solomon Islands, Melanesia. H. Buckley, University of Otago, Dunedin, New Zealand.
41. The Upper Paleolithic triplex burial of Dolni Vestonice: Pathology and funerary behaviour. V. Formicola, A. Pontrandolfi, University of Pisa, Italy, J. Svoboda, Czech Academy of Sciences, Brno, Czech Republic.

#### PLENARY SESSION

THREE SEASONS, 5:30-6:30 PM

*Immoral Reflections: Chimpanzee Behavior and the Problem of Human Violence.* Richard W. Wrangham, Harvard University, Cambridge, MA.

FRIDAY MORNING, APRIL 3, 1998

SESSION 13: GRANARY-MARKET ST.

*PALEOPATHOLOGY III. CONTRIBUTED PAPERS.*

*Chair:* B. Baker, New York State Museum, Albany.

FRIDAY, APRIL 3, 1998

SESSION 13

- 8:00 AM Palaeopathology and the treatment of the poor in an 18th and 19th century infirmary. D.J. Robertson, H.V. Start, University of Sheffield, South Yorkshire, UK.
- 8:15 Morbid osteology: Osteological evidence for post mortem procedures from Newcastle Infirmary Burial Ground (1753-1845). H.V. Start, D.J. Robertson, University of Sheffield, South Yorkshire, UK.
- 8:30 Respiratory infection in the individuals from the Post-Medieval crypt at Spitalfields, London: A biocultural approach. C.A. Roberts, University of Bradford, UK.
- 8:45 Health among the Poole-Rose Ossuary population as inferred from transverse lines in the left tibiae. G.A. Listi, Louisiana State University, Baton Rouge.
- 9:00 A comparison of childhood morbidity and mortality in two Late Medieval cemeteries in Denmark. P. Bennike, University of Copenhagen, Denmark, M.E. Lewis, University of Bradford, UK, H. Schutkowski, Göttingen University, F. Valentin, National Museum of Natural History, Paris, France.
- 9:15 Maxillary sinusitis in an elderly population from the Texas State Cemetery. J.E. Baker, Texas A&M University, College Station, H.D. Dockall, U.S. Army Central Identification Laboratory, Hickam Air Force Base, HI.
- 9:30 Stature and stress in a 19th-century middle class skeletal series. S.M. Phillips, State University of New York, Albany.
- 9:45 Morbidity and mortality in the late PPNB population from Basta (Jordan). M. Schultz, Zentrum Anatomie, University of Göttingen, Germany, M. Berner, Abteilung Anthropologie, Museum of Natural History, Vienna, Austria, T.-H. Schmidt-Schultz, Zentrum Biochemie, University of Göttingen, Germany.
- 10:00 Did syphilis exist in India before 1492?: A rebuttal to Rao and Vasulu. M. Jackson, G.J. Armelagos, Emory University, Atlanta, GA.
- 10:15 INTERMISSION
- 10:30 The skeletal biology of pellagra with intensive maize horticulture in the New World. B.P. Brenton, St. John's University, Jamaica, NY, R.R. Paine, Texas Tech University, Lubbock, TX.
- 10:45 Stress and mortality in pre-protolithic samples from central-southern Italy: Linear enamel hypoplasia and demographic aspects. A. Cucina, A. Coppa, Università di Roma 'La Sapienza', Italy, G. Gruppioni, D. Mancinelli, Università de L'Aquila, Italy.
- 11:00 Fijian cannibalism and mortuary ritual: Evidence from Vunda. D. Degusta, University of California, Berkeley.
- 11:15 Cut sternums in Tlatelolco, Mexico City: Evidence of human sacrifice by heart extraction? C. Pijoan, Instituto Nacional de Antropología e Historia, Mexico.

- 11:30           Ritual destruction of human remains: A case in southeastern Ohio. H.J.H. Edgar, Ohio State University, Columbus.

## SESSION 14: SEASONS SOUTH

*PRIMATES III: PRIMATE BEHAVIOR. CONTRIBUTED PAPERS.*

- Chair:*           D. P. Watts, Yale University, New Haven, CT.
- 8:00 AM       Male behavior in extragroup encounters: An example of the collective action problem? C.L. Nunn, Duke University, Durham, NC.
- 8:15           Infanticide as an extreme form of female reproductive competition in primates and social carnivores. L.J. Digby, M.Y. Merrill, E.T. Davis, Duke University, Durham, NC.
- 8:30           Hand preferences for feeding in free living simakobu monkeys (*Simias concolor*): The effects of posture and balance. C.T. Miller, University of Colorado, Boulder, L.M. Paciulli, State University of New York, Stony Brook.
- 8:45           Manual laterality in anvil use: Wild chimpanzees (*Pan troglodytes*) cracking *Strychnos* fruits. W.C. McGrew, L.F. Marchant, Miami University, Oxford, OH, R.W. Wrangham, Harvard University, Cambridge, MA, H. Klein, Redmond, WA.
- 9:00           Right and left hand use preferences in a power grip task among *Pan paniscus* at Wamba, Zaire. E.J. Ingmanson, Dickinson College, Carlisle, PA.
- 9:15           Within and between group social encounters among white-handed gibbons (*Hylobates lar*) in Khao Yai National Park, Thailand. T.Q. Bartlett, Dickinson College, Carlisle, PA.
- 9:30           Intelligent tool use in wild Sumatran orangutans (*Pongo pygmaeus abelii*). A.F. Sitompul, Leusser Development Programme, Medan, Sumatera Utara, Indonesia, E.A. Fox, C.P. Van Schaik, Duke University, Durham, NC.
- 9:45           Orangutan cultures? C.P. Van Schaik, Duke University, Durham, NC, C. Knott, Harvard University, Cambridge, MA.
- 10:00          INTERMISSION
- 10:15          The function of male sexual aggression and female resistance in wild Sumatran orangutans (*Pongo pygmaeus abelii*). E.A. Fox, Duke University, Durham, NC.
- 10:30          Social system dynamics, ranging patterns and male and female strategies in wild Bornean orangutans (*Pongo pygmaeus*). C.D. Knott, Harvard University, Cambridge, MA.
- 10:45          Post-conflict interactions in a small group of chimpanzees: Group dynamics and individual effects. A. Fuentes, M.J. Harvey, Central Washington University, Ellensburg.
- 11:00          Chimpanzee male aggression and sexual coercion at Ngogo, Kibale National Park, Uganda. D.P. Watts, Yale University, New Haven, CT.

FRIDAY, APRIL 3, 1998

SESSION 14 / SESSION 15

- 11:15 Comparative behavioral ecology of sympatric Bwindi gorillas and chimpanzees, Uganda: Preliminary results. M.L. Goldsmith, A.E. Hanke, Dartmouth College, Hanover, NH, J.B. Nkurunungi, Makerere University, Kampala, Uganda, C.B. Stanford, University of Southern California, Los Angeles.
- 11:30 The density of herbaceous vegetation in south-west Central African Republic: Implications for western lowland gorilla (*Gorilla gorilla gorilla*) socioecology. D. Doran and A. McNeilage, State University of New York, Stony Brook.
- 11:45 Midtarsal flexibility in ape foot dynamics, early hominid footprints and bipedalism. D.J. Meldrum, Idaho State University, Pocatello, R.E. Wunderlich, Pennsylvania State University, University Park.

SESSION 15: SEASONS NORTH

*GENETICS I: GENETICS, POPULATION GENETICS, MOLECULAR BIOLOGY.  
CONTRIBUTED PAPERS.*

- Chair:* J. Rogers, Southwest Foundation for Biomedical Research, San Antonio, TX.
- 8:00 AM The quantitative genetics of dermatoglyphics: Variances, covariances and developmental integration. S.D. Ousley, Smithsonian Institution, Washington, DC.
- 8:15 Fluctuating asymmetry of a-b ridge count and canalization: An appraisal based on Indian population samples of diverse backgrounds. B.M. Reddy, University of Kansas, Lawrence.
- 8:30 Population data suggests that inter-locus genetic variation at trinucleotide repeats is mutation driven. R. Deka, University of Pittsburgh, PA, M. Kimmel, Rice University, Houston, TX, R. Chakraborty, University of Texas School of Public Health, Houston.
- 8:45 Pitfalls of ancient DNA analysis in New World human populations. C.J. Kolman, N. Tuross, Smithsonian Institution, Conservation Analytical Laboratory, Suitland, MD.
- 9:00 A new strategy for DNA sex determination from ancient human skeletons. D.Y. Yang, B. Eng, J.S. Wayne, J.C. Duda, S.R. Saunders, McMaster University, Hamilton, Ontario, Canada.
- 9:15 Worldwide distribution of Y chromosome haplotypes: Implications for the origin(s) of Native Americans. T.M. Karafet, University of Arizona, Tucson, Institute of Cytology and Genetics, Novosibirsk, Russia, S.L. Zegura, M.F. Hammer, University of Arizona, Tucson.
- 9:30 MtDNA and Y chromosome variation in South Indian populations. M. Bamshad, W.S. Watkins, M.E. Moore, University of Utah, Salt Lake City, B. Bhaskara Rao, J.M. Naidu, B.V.R. Prasad, Andhra University, Visakhapatnam, India, Anthropological Survey of India, Calcutta, P.G. Reddy, University of Madras, India, C. Watkins, University of Utah, Salt Lake City, A. Rasanayagam, M.F. Hammer, University of Arizona, Tucson, L.B. Jorde, University of Utah, Salt Lake City.



- 9:45 Study of genetic polymorphism of microsatellite marker D21S11 in the Jat Sikh population of Punjab. A.J.S. Bhanwer, Guru Nanak Dev University, Armritsar, India, S.K. Mahajan, BARC, Trombay, Mumbai, India, I.S. Sidhu, Kirandeep Kaur, Guru Nanak Dev University, Armritsar, India, D.S. Joshi, R. Mukhopadhyaya, R. Gangabhairathi, Molecular Biology and Agriculture Division, Trombay, Mumbai, India, S.K.G. Shettigar, Medical Division, Trombay, Mumbai, India.
- 10:00 INTERMISSION
- 10:15 A genetic linkage map of the baboon (*Papio hamadryas*) genome with 10 cM resolution. J. Rogers, Southwest Foundation for Biomedical Research, San Antonio, TX, P.A. Morin, Sequana Therapeutics, Inc., La Jolla, CA, M.C. Mahaney, Southwest Foundation for Biomedical Research, San Antonio, TX, S. Wedel, Sequana Therapeutics, Inc., La Jolla, CA.
- 10:30 Genetic structure reflects social organization in hybrid hamadryas and anubis baboons. T. Woolley-Barker, New York University, New York.
- 10:45 Mitochondrial DNA diversity and biogeography of Eastern gorillas. M.I. Seaman, K. Saltonstall, K.K. Kidd, Yale University, New Haven, CT.
- 11:00 Demographic history and mtDNA sequence diversity in common chimpanzees. C. Ahlstrom, J. Hawks, K. Hunley, S. Oh, University of Michigan, Ann Arbor.
- 11:15 Phylogenetic relationships among the Atelinae based on mtDNA analysis. A.C. Collins, University of Wisconsin, Madison, Brookfield Zoological Society, Chicago, IL, J. Dubach, Brookfield Zoological Society, Chicago, IL, W. Leutenegger, University of Wisconsin, Madison.
- 11:30 A preliminary examination of the taxonomy of *Leonopithecus* using mitochondrial ND4 and D-loop sequences. B. Perez-Sweeney, M. Forstner, C. Valladares-Padua, D. Melnick, Columbia University, NY.
- 11:45 Genetic analysis of *Lemur catta* from the Andringtra Massif of Madagascar. A.D. Yoder, Northwestern University and Field Museum of Natural History, Chicago, IL, S.V. Rakotoarisoa, University of Anatananarivo, Madagascar, S. Goodman, Field Museum of Natural History, Chicago, IL, WWF, Anatananarivo, Madagascar.

## SESSION 16: THREE SEASONS

*PALEOANTHROPOLOGY IV: TEACHING EVOLUTION (AND CONFRONTING CREATIONISM) IN THE COLLEGE CLASSROOM. SYMPOSIUM.*

Continuing efforts by scientific creationists to influence science teaching in public schools as well as a lack of understanding—and, indeed, an underlying suspicion of the topic—among much of the general public, makes teaching evolution, even in the college setting, a challenge beyond the already challenging task involved in presenting the basic scientific information. This session consists of ideas, both theoretical and pedagogical, that might be considered in taking these problems into account in the teaching of evolutionary biology and physical anthropology especially.



FRIDAY, APRIL 3, 1998

SESSION 16 / SESSION 17

*Organizers*

*and Chairs:* M.A. Park, Central Connecticut State University, New Britain, and E.C. Scott, National Center for Science Education, El Cerrito, CA.

- 8:30 AM Evolution, worldviews, and the Institute for Creation Research. L.D. Wolfe, East Carolina University, Greenville, NC.
- 8:45 Philosophical and methodological naturalism and the teaching of evolution: The problems of purpose, design, and cause. E.C. Scott, National Center for Science Education, Inc., El Cerrito, CA.
- 9:00 Questioning evolution: Teaching what we don't know. R.J. Meier, Indiana University, Bloomington.
- 9:15 The challenge of teaching Darwin. A.L. Zihlman, University of California, Santa Cruz.
- 9:30 Humans as a case study for the evidence of evolution. M.K. Nickels, Illinois State University, Normal.
- 9:45 Using a college forum to teach evolution in a unique and non-threatening way. P.C. Ashmore, University of Missouri, St. Louis.
- 10:00 Homeopathic pedagogy or, read some taxonomy and call me in the morning. M.A. Park, Central Connecticut State University, New Britain.
- 10:15 Discussant. L. Lieberman, Central Michigan University, Mount Pleasant.

SESSION 17: HARVEST-SMOKEHOUSE

*SKELETAL BIOLOGY III: POSTERS.*

*Chair:* R.A. Walker, New York Chiropractic College, Seneca Falls, NY.

*Times:* 8:00-8:30 AM Poster set-up.  
8:30-10:00 AM Authors of even-numbered posters present for questions.  
10:30 AM-12:00 PM Authors of odd-numbered posters present for questions.  
12:00-12:30 PM Poster take-down.

1. A demographic analysis of northern and western European mesolithic cemeteries. E.H. Harmon, Arizona State University, Tempe.
2. Craniometry of Pacific coast Athapaskans and population relationships along the North Pacific coast. G.L. Tasa, University of Oregon, Eugene.
3. Dimensions of the pterygomaxillary hiatus: Afro-Euro-American variability. R.T. Koritzer, L.E. St. Hoyme, Smithsonian Institution, Washington, DC.
4. Positional changes in the frontoparietal ossification centers in perinatal craniosynostotic rabbits. J.J. Dechant, M.P. Mooney, G.M. Cooper, T.D. Smith, A.M. Burrows, H.W. Losken, I.M.J. Mathijssen, M.I. Siegel, University of Pittsburgh, PA, Erasmus Universiteit Rotterdam, The Netherlands.
5. Influence of congenital craniosynostosis on coronal suture interdigitating length. A.M. Kreithen, University of Pittsburgh, PA, A.M. Burrows, Slippery Rock

- University, PA, M.P. Mooney, H.W. Losken, University of Pittsburgh, PA, T.D. Smith, Slippery Rock, PA, M.I. Siegel, University of Pittsburgh, PA.
6. Middle meningeal vessel pattern expression in rabbits with nonsyndromic congenital coronal synostosis. V.D. O'Loughlin, Medical Sciences Program, Indiana University, Bloomington, A.M. Burrows, T.D. Smith, School of Physical Therapy, Slippery Rock University, PA, M.P. Mooney, H.W. Losken, M.I. Siegel, University of Pittsburgh, PA.
  7. Vitamin D receptor genotype and cortical bone density: An analysis of possible relationships. C.R. Tillquist, University of Arizona, Tucson.
  8. Comparative dural venous sinus morphology in congenital coronal synostosis. A.M. Burrows, Slippery Rock University, PA, V.D. O'Loughlin, Indiana University, Bloomington, T.D. Smith, Slippery Rock University, PA, M.P. Mooney, H.W. Losken, M.I. Siegel, University of Pittsburgh, PA.
  9. Allometric variability in the cross-sectional properties of the human femoral midshaft. J. Stock, S. Pfeiffer, University of Guelph, Ontario.
  10. Why are Chinese shorter than Europeans: The Chinese side of the story. H. Chen, B.Q. Huang, The Hospital of Chinese Medicine, ShiQiao, Guangdong, People's Republic of China.
  11. Comparability of lunar age calculated from Fazekas and Kosa's data on diaphyseal lengths to lunar age assigned to the fetal collections prior to curation at the National Museum of Natural History. F. Kosa, Albert Szent-Gyorgi Medical University, Szeged, Hungary, A.K. Huxley, University of Arizona, Tucson.
  12. Morphology of the drifting osteon. A.G. Robling, S.D. Stout, University of Missouri, Columbia.
  13. Second metacarpal midshaft geometry in an historic cemetery sample. R.A. Lazenby, University of Northern British Columbia, Prince George, Canada.
  14. Simulations of interobserver error within Howells' data set. M.L. Rhoads, University of New Mexico, Albuquerque.
  15. Comparison of bone macrostructure and microstructure of exercised and sedentary swine (*Sus scrofa*). M.S. Drapeau, University of Missouri, Columbia.
  16. Sexual dimorphism in the modern human femur: Application of linear and areal data. K.A. Metzger, C. Lacoste, University of California, Santa Cruz.
  17. Mandibular morphology in human populations: An examination of primary muscle attachment and architectonic models for development of the ramus. J.Y. Anderson, University of New Mexico, Albuquerque.
  18. Discriminant functions for the estimation of sex: Carpal and tarsal metric data from the prehistoric Windover skeletal population. K.C. Hoover, Southern Illinois University, Carbondale.

19. Sex differences in weight prediction from the femur and sacrum. D. Walrath, University of Pennsylvania, Philadelphia.

## SESSION 18: HARVEST-SMOKEHOUSE

*PRIMATES IV: PRIMATE BEHAVIOR. POSTERS.*

*Chair:* J.E. Lambert, University of Florida, Gainesville.

*Times:* 8:00-8:30 AM Poster set-up.  
 8:30-10:00 AM Authors of even-numbered posters present for questions.  
 10:30 AM-12:00 PM Authors of odd-numbered posters present for questions.  
 12:00-12:30 PM Poster take-down.

20. Forest composition and bamboo distribution: Influences on the distribution of *Hapalemur* species. C. Grassi, University of Texas, Austin.
21. Comparison of food passage time in three species of *Hapalemur*. C.L. Tan, State University of New York, Stony Brook.
22. A preliminary study of the Philippine tarsier in Leyte. M. Dagosoto, Northwestern University, Chicago, D.L. Gebo, Northern Illinois University, DeKalb.
23. A preliminary census and study of habitat use of the primates of the northern Iwokrama Reserve, Guyana. M.L. Sauther, University of Colorado, Boulder, B. Wright, University of Illinois, Urbana, K. Orndorff, Northwestern University Medical School, Chicago.
24. Effects of habitat change upon the social behavior of captive spider monkeys (*Ateles fusciceps*). D.F. Cox, J.A. Runestad, Western Illinois University, Macomb.
25. A dynamic modeling approach to the study of callitrichine life history, demography, and social systems. J.A. Rehg, University of Illinois, Urbana.
26. The socioecology and function of play in *Colobus guereza* and *Procolobus pennantii* in Kibale National Park, Uganda. E.A. Worch, Indiana University, Bloomington.
27. Dominance and female affiliative patterns in rhesus macaques (*M. mulatta*): An assessment of stable social relations in Old World monkey females. N.B. Harrington, University of Oregon, Eugene.
28. Growing up: Defining adolescence for female savanna baboons (*Papio cynocephalus*). E.M. Erhart, Southwestern University, Georgetown, TX, Southwest Texas State University, San Marcos.
29. Incest avoidance and structured mating behaviors in the context of sexually transmitted diseases. C.A. Bramblett, S.S. Bramblett, University of Texas, Austin.
30. More than the elite meet to eat: Meat distribution at hunts by wild chimpanzees (*Pan troglodytes*). L.F. Marchant, W.C. McGrew, Miami University, Oxford, OH.

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SESSION 18 / SESSION 19

31. Nesting behavior: Implications for determining group dynamics of mountain gorillas in Bwindi-Impenetrable National Park, Uganda. A.E. Hanke, M.L. Goldsmith, Dartmouth College, Hanover, NH.
32. Methods for analysis of forest structure in studies of primate positional behavior. S.E. Walker, Humboldt State University, Arcata, CA, D.J. Bergeson, Washington University, St. Louis, MO.
33. Laterality of hand and foot usage in Colobine monkeys. A. Carter, University of California, Berkeley.
34. Leading limb preference during duetting in *Hylobates*. J.C. Redmond Jr., State University of New York, Albany.
35. Hand positions in human climbing. J.P. Lawrence-Taylor, J.C. Ohman, University of Liverpool, UK.

#### LUNCHEON

THREE SEASONS, 12:05-2:00 PM

Luncheon talk: *Genetic Approaches to Modern Human Origins: Perspectives From the Y Chromosome*. Michael F. Hammer, University of Arizona, Tucson.

#### FRIDAY AFTERNOON, APRIL 3, 1998

SESSION 19: GRANARY-MARKET ST.

##### *PALEOPATHOLOGY IV: NORTH AMERICAN TREPONEMATOSIS: A NATURAL HISTORY. SYMPOSIUM.*

Over the past century, paleopathological research has established the undisputable presence of one or more forms of treponematosi s in prehistoric North America. However, many questions remain unanswered about this protean disease. This symposium presents a series of systematic critical evaluations of treponematosi s in 10 diverse geographic regions of North America, including detailed information on temporal, ecological, and sociocultural contexts, "goodness of fit" between observed skeletal evidence and current models of different treponemal syndromes, and evidence pro and con for the presence of venereal syphilis.

##### *Organizers*

*and Chairs:* M.L. Powell, University of Kentucky, Lexington, and D.C. Cook, Indiana University, Bloomington.

2:00 PM Introduction—North American treponematosi s: Inquiries into the natural history of a protean disease (no abstract). M.L. Powell, University of Kentucky, Lexington, D.C. Cook, Indiana University, Bloomington.

2:15 Treponematosi s in the northeastern U.S. before and after 1492. B.J. Baker, New York State Museum, Albany.

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SESSION 19 / SESSION 20A

- 2:30 Treponematosi in the prehistoric Caribbean, North Carolina coast and Kentucky: Diagnostic considerations. M.K. Sandford, G. Bogdan, G.E. Kissling, University of North Carolina, Greensboro, D.S. Weaver, Wake Forest University, Winston-Salem, NC.
- 2:45 Treponematosi in the prehistoric Caribbean, North Carolina coast and Kentucky: Paleoepidemiological and evolutionary perspectives. D.S. Weaver, Wake Forest University, Winston-Salem, NC, M.K. Sandford, G. Bogdan, G.E. Kissling, University of North Carolina, Greensboro.
- 3:00 Temporal and spatial variation in the patterns of treponematosi in *La Florida*. D.L. Hutchinson, East Carolina University, Greenville, C.S. Larsen, University of North Carolina, Chapel Hill, M. Williamson, Purdue University, West Lafayette, IN, V.D. Green Clow, Geo-Marine, Inc., Plano, TX.
- 3:15 ‘Syphilis in Mound Builder’s Bones’: Treponematosi in the prehistoric south-east. M.L. Powell, University of Kentucky, Lexington, L.E. Eisenberg, State Historical Society of Wisconsin, Madison.
- 3:30 Syphilis? Not quite: Paleoepidemiology in an evolutionary context in the Midwest. D.C. Cook, Indiana University, Bloomington.
- 3:45 INTERMISSION
- 4:00 Treponematosi in the northern and central Great Plains: Its nature and distribution. D.C. Hodges, Northern Illinois University, DeKalb, S.J. Schermer, Office of the State Archaeologist, University of Iowa, Iowa City.
- 4:15 Variations in the skeletal record of prehistoric treponematosi on the Gulf Coastal Plain. D. Wilson, University of Texas, Austin.
- 4:30 Bone by bone, pueblo by pueblo: Reviewing the evidence for treponemal infection in the prehistoric Southwest. A.L.W. Stodder, Field Museum of Natural History, Chicago, IL.
- 4:45 Prehistoric treponematosi in the western United States. P.L. Walker, University of California, Santa Barbara, P.M. Lambert, Utah State University, Logan.
- 5:00 Treponematosi in Mexico. J. Mansilla, C. Pijoan, Instituto Nacional de Antropologia e Historia, Mexico City, Mexico.
- 5:30 Discussant. G. Armelagos, Emory University, Atlanta, GA.
- 5:45 Discussant. C. Merbs, Arizona State University, Tempe.

SESSION 20A: SEASONS SOUTH

*PALEOANTHROPOLOGY VA: PRIMATE EVOLUTION. CONTRIBUTED PAPERS.*

- Chair:* W.L. Jungers, State University of New York, Stony Brook.
- 2:00 PM The application of photogrammetry to small fossil specimens. W.A. Niewoehner, University of New Mexico, Albuquerque.

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SESSION 20A / SESSION 20B

- 2:15 Koalas and primates: What can one learn about primate origins and adaptations by observing koalas. M. Henneberg, K.M. Lambert, C. De Miguel, J. Haynes, University of Adelaide, Australia, M. Lavelle, University of Rhode Island, Kingston.
- 2:30 Unmasking an Eocene primate enigma: The true identity of *Hoanghoniuss tehlinii*. C. Beard, Carnegie Museum of Natural History, Pittsburgh, PA.
- 2:45 Body size and shape of a Bridger C notharctine primate: Adaptive implications. H.H. Covert, J. Harris, University of Colorado, Boulder, B.A. Payseur, C.J. Vinyard, Northwestern University, Chicago, IL.
- 3:00 Primate locomotion and vestibular morphology, with special reference to *Adapis*, *Necrolemur* and *Megaladapis*. F. Spoor, University College London, UK, A. Walker, Pennsylvania State University, University Park, J. Lynch, P. Liepins, Guy's Hospital, London, F. Zonneveld, Utrecht University Hospital, The Netherlands.
- 3:15 Optic canal and orbit size—implications for the origins of diurnality and visual acuity in primates. W.G. Gonzalez, R.F. Kay, E.C. Kirk, Duke Medical Center, Durham, NC.
- 3:30 Morphometric modeling of evolutionary form change. T.M. Cole III, University of Missouri, Kansas City, M.A. O'Leary, State University of New York, Stony Brook, S. Lele, J.T. Richtsmeier, Johns Hopkins University, Baltimore, MD.

SESSION 20B: SEASONS SOUTH

*PALEOANTHROPOLOGY VB: HOMINID EVOLUTION. CONTRIBUTED PAPERS.*

- Chair:* J. Calcagno, Loyola University, Chicago, IL.
- 4:00 PM A hierarchical analysis of craniofacial variation in *Homo habilis* compared to a modern human analog. J.M.A. Miller, G.H. Albrecht, University of Southern California, Los Angeles, B.R. Gelvin, California State University, Northridge.
- 4:15 Morphometric variability in *Homo erectus*. J.H. Kidder, University of Tennessee, Knoxville.
- 4:30 New reconstruction of the Middle Pleistocene skull of Steinheim (Baden-Württemberg, Germany). M. Braun, Nancy Université, France, J.J. Hublin, CNRS, Paris, France, P. Boucher, CRIN-LORIA, Nancy, France.
- 4:45 Cannibals in the Cooks? Island biogeography and hominid behavior. S.C. Antón, D.W. Steadman, University of Florida, Gainesville.
- 5:00 Preliminary paleoanthropological field research in West Java, Indonesia. A. Kramer, University of Tennessee, Knoxville, T. Djubiantono, Archaeological Research and Development Center, Bandung, West Java, Indonesia.
- 5:15 A comparison of the temporal bone of aboriginal Australians with that of other modern human populations. R.M. Robinson, University of Melbourne, Victoria, Australia, L.C. Aiello, University College London, UK.

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SESSION 20B / SESSION 21

5:30 Characterizing emergence in hominid evolution. A.M. Palkovich, George Mason University, Fairfax, VA.

SESSION 21: SEASONS NORTH

*GENETICS II: GENETICS AND ORIGINS OF HUMAN DIVERSITY. SYMPOSIUM.*

This symposium focuses on the use of genetic data and models and methods of population genetics for addressing questions about the origins of modern humans, both on a global basis—multiregional evolution versus African replacement—and on a regional basis.

*Organizers*

*and Chairs:* J.H. Relethford, State University of New York, Oneonta, and H.C. Harpending, University of Utah, Salt Lake City.

*Co-sponsored by the American Association of Anthropological Genetics.*

2:00 PM Population genetics and models of modern human origins. J.H. Relethford, State University of New York, Oneonta.

2:15 Bayesian inference about ancient population sizes. A.R. Rogers, University of Utah, Salt Lake City.

2:30 Nuclear gene diversity and the relative antiquity of human populations: Studies with a Monte Carlo model. K.A. Korey, Dartmouth College, Hanover, NH.

2:45 Interpretation of population structure when group structure is unknown. S.M. Donnelly, University of Utah, Salt Lake City, L.W. Konigsberg, University of Tennessee, Knoxville, C.B. Stringer, The Natural History Museum, London, UK.

3:00 Nested cladistic analysis of human Y chromosome variation: Out of Africa and back again. M.F. Hammer, T. Karafet, A. Rasanayagam, E.T. Wood, T.K. Altheide, University of Arizona, Tucson, T. Jenkins, University of Witwatersrand, Johannesburg, South Africa, R.C. Griffiths, Monash University, Clayton, Australia, A.R. Templeton, Washington University, St. Louis, MO, S.L. Zegura, University of Arizona, Tucson.

3:15 Nuclear DNA single nucleotide polymorphisms (SNPs): How much can extant variation tell us about human origins? J.L. Mountain, University of California, Berkeley.

3:30 Support of the 'Out-of-Africa' theory of evolution of modern humans from microsatellite polymorphisms. R. Chakraborty, University of Texas School of Public Health, Houston, M. Kimmel, Rice University, Houston, TX, R. Deka, University of Pittsburgh, PA.

3:45 Modern human origins inferred from nuclear genetic haplotype data. S.A. Tishkoff, A.G. Clark, Pennsylvania State University, University Park, J.R. Kidd, Yale University, New Haven, CT, H. Soodyall, T. Jenkins, Witwatersrand University, Johannesburg, South Africa, K.K. Kidd, Yale University, New Haven, CT.

4:00 INTERMISSION



- 4:15 The genetic ancestry of modern humans: Inferences from the analysis of DNA sequence diversity at the human *B*-globin locus. S.M. Fullerton, University of Durham, U.K, M.T. Webster, Y.-T. Liu, R.M. Harding, University of Oxford, UK, R.C. Griffiths, Monash University, Australia, J.B. Clegg, University of Oxford, UK.
- 4:30 New approaches to modeling human population structure with *Alu* elements. S.T. Sherry, Louisiana State University Medical Center, New Orleans, H. Harpending, University of Utah, Salt Lake City, M. Stoneking, Pennsylvania State University, University Park, M.A. Batzer, Louisiana State University Medical Center, New Orleans.
- 4:45 Origins of modern humans: A direct comparison of Y chromosome, mitochondrial, and autosomal data. L.B. Jorde, M.J. Bamshad, W.S. Watkins, S. Sung, M.E. Moore, J.K. Lum, A.R. Rogers, University of Utah School of Medicine, Salt Lake City.
- 5:00 The peopling of Sahul: A genetic perspective. M. Stoneking, A.J. Redd, Pennsylvania State University, University Park.
- 5:15 Ethnohistory, genetics, and cancer mortality in Europeans. R.R. Sokal, M.S. Rosenberg, State University of New York, Stony Brook.
- 5:30 Peopling of the New World: A molecular perspective. J. McComb, University of Kansas, R.J. Mitchell, La Trobe University, Australia, M.S. Schanfield, M.H. Crawford, University of Kansas.
- 5:45 Discussant. K. Weiss, Pennsylvania State University, University Park.

## SESSION 22: HARVEST-SMOKEHOUSE

*DENTAL ANTHROPOLOGY I: POSTERS.*

*Chair:* S. Hillson, University College London, UK.

*Times:* 2:00-2:30 PM Poster set-up.  
 2:30-4:00 PM Authors of even-numbered posters present for questions.  
 4:30-6:00 PM Authors of odd-numbered posters present for questions.  
 6:00-6:30 PM Poster take-down.

1. Crossroads of the Pacific: A study of human dentition from Vanuatu. J.D. Weets, Pennsylvania State University, University Park.
2. Enamel microwear in a southeastern Mississippian sample. M.G. Muendel, M.K. Marks, University of Tennessee, Knoxville.
3. Analysis of dental non-metrics and demography to determine familial use of four Hellenistic-Early Roman (325 BC-AD 150) tombs in a rural inland site at Malloura, Cyprus. T.A. Tung, University of North Carolina, Chapel Hill.
4. Secular change of Japanese occlusion: The frequency of the overbite and its association with food preparation techniques and eating habits. N. Seguchi, University of Michigan, Ann Arbor.



5. Sex-based differences in dental pathology rates in two Sudanese Nubian cemeteries. Y.K. Hallein, University of Colorado, Boulder.
6. Lip plug (bezote) abrasion facets in a Tarascan burial from Urichu, Michoacan. L. Cahue, N.J. Sauer, H.P. Pollard, Michigan State University, East Lansing.
7. Incisor microwear and anterior tooth use in three Native American populations. P.S. Ungar, University of Arkansas, Fayetteville, M.A. Spencer, Duke University, Durham, NC.
8. Incidence of alveolar bone loss in a nineteenth century, pre-industrial poorhouse cemetery. P.T. Daly, J.E. Sirianni, State University of New York, Buffalo.
9. Dental attrition and disease in several Pacific Ocean Island populations—Jomonese, Ainu, Maori and Aleut. R. Sakashita, Kagoshima University, Japan, N. Inoue, University of Tokyo, Japan, T. Kamegai, Iwate Medical College, Japan, D.R. Hunt, Smithsonian Institution, Washington, DC.
10. Variation of dental microstructural growth markers in the enamel of three modern human populations. C.M. Fitzgerald, McMaster University, Hamilton, Ontario, Canada.
11. Tooth mineralization standards for the mandibular molar in American blacks and whites. E.F. Harris, University of Tennessee, Memphis.
12. Are we underestimating canine sexual dimorphism in humans? H.J. Keene, University of Texas Health Science Center, Dental Branch, Houston.
13. Cranial thickness and morphometrics in *Homo sapiens*. H. Wood, R.A. Foley, Cambridge University, UK, M.M. Lahr, Universidade de São Paulo, Brazil.
14. Differential diagnosis of periapical cavities in alveolar bone. N. Tayles, G. Dias, University of Otago, Dunedin, New Zealand.

## SESSION 23: HARVEST-SMOKEHOUSE

*HUMAN BIOLOGICAL VARIATION IV: POSTERS.*

*Chair:* S. Gray, University of Kansas, Lawrence.

*Times:* 2:00-2:30 PM Poster set-up.  
 2:30-4:00 PM Authors of even-numbered posters present for questions.  
 4:30-6:00 PM Authors of odd-numbered posters present for questions.  
 6:00-6:30 PM Poster take-down.

15. Which criteria should be chosen to define VO<sub>2</sub> max in non-Western children? I. Sarton-Miller, University of Washington, Seattle.
16. A field test of work capacity: Ifugao rice farmers. A.T. Steegmann Jr., State University of New York, Buffalo, S.J. Hewner, HSA, D'Youville College, Buffalo, NY.
17. Sexual dimorphism in latitudinal variation in the body mass index. B.L. O'Neil, University of Tennessee, Knoxville.

18. Computer simulation of the effects of partner exchange rates on HIV virulence evolution. D.S. Pieczkiewicz, University of Minnesota, Minneapolis, University of Kansas, J.H. Mielke, University of Kansas, Lawrence.
19. Effects of schizophrenia on universal human facial expression. K.L. Schmidt, University of California, Berkeley.
20. Testosterone predicts disease symptoms among Turkana males. B. Campbell, W. Lucas, M. Turner, Northwestern University, Evanston, IL, K. Campbell, University of Massachusetts, Boston, P.W. Leslie, University of North Carolina, Chapel Hill.
21. Health differences between settled and nomadic Turkana men. N.L. Barkey, B.C. Campbell, Northwestern University, Evanston, IL, P.W. Leslie, University of North Carolina, Chapel Hill.
22. Patterns of morbidity in Karamoja, Uganda, 1992-1996. H. Devlin, S.J. Gray, University of Kansas, Lawrence.
23. Comparison of body composition among settled and nomadic Turkana. S. Corbett, S. Gray, University of Kansas, Lawrence, B. Campbell, Northwestern University, Evanston, IL, P.W. Leslie, University of North Carolina, Chapel Hill.
24. Anthropometric data of adolescent girls from urban and rural communities in Mali, West Africa. L.R. Pawloski, Indiana University, Bloomington.
25. Growth velocity variation and disease observed in rural Costa Rican children. K.M. Van Wageningen, T.B. Gage, State University of New York, Albany.
26. Growth and health of tri-hybrid (Caboclo) populations of the Brazilian Amazon. H.P. Silva, Ohio State University, Columbus.
27. Somatometric and physiological variations among adolescent Khasi girls of Meghalaya. P.S. Gill, University of Cincinnati Medical Center, OH, R.K. Pathak, North-Eastern Hill University, Shillong, India, P.A. Porter-Gill, Children's Hospital Medical Center, Cincinnati, OH.
28. Female growth canalization: Do boys have more to lose? C.W. Kuzawa, Emory University, Atlanta, GA.
29. The relationship between ambulatory blood pressure and body composition in Japanese-American school teachers in Hawaii: Preliminary results. D.E. Brown, S.L. Aki, M.B. Etrata, G.M. Napiha'a, University of Hawaii, Hilo, G.D. James, Cornell Medical Center, NY.
30. Birth weight, length and body composition among Black-Americans, and White-Americans of low socioeconomic status. M.V. Gallo, M.M. Denham, L.M. Schell, S. Czerwinski, University at Albany, NY, A.D. Stark, Department of Health, Albany, NY.
31. Parent-infant co-sleeping: Attitudes and practices in North Tees, England. E. Hooker, H.L. Ball, University of Durham, UK, P.J. Kelly, University of Teesside, UK.

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SATURDAY, APRIL 4, 1998

SESSION 23 / SESSION 24

32. Prenatal long bone growth and proportionality in fetal abortus and stillborns. M.W. Warren, University of Florida, Gainesville.
33. Perinatal brain growth in craniosynostotic rabbits. M.P. Mooney, G.M. Cooper, A.M. Burrows, T.D. Smith, J. Dechant, H.W. Losken, J.L. Marsh, M.I. Siegel, University of Pittsburgh, PA, Washington University, St. Louis, MO.
34. Use of craniofacial anthropometry to determine pattern of inheritance in Beckwith-Wiedemann syndrome. E.S. Moore, Indiana University, Bloomington, R.E. Ward, Indiana University, Indianapolis.
35. Size of the adult human vomeronasal organ. T.D. Smith, A.M. Burrows, Slippery Rock University, PA, M.I. Siegel, M.P. Mooney, University of Pittsburgh, PA, P.A. Fabrizio, F.R. Clemente, Duquesne University, Pittsburgh, PA.
36. Variability in the human *M. spinalis capitis et cervicis*: Frequencies and definitions. T.M. Greiner, M.E. Bedford, R.A. Walker, New York Chiropractic College, Seneca Falls.
37. A comparison of EMG and optimization-based estimates of force in hip abductor muscles during level walking. J.D. Polk, X. Chen, State University of New York, Stony Brook, L.M. Maclatchy, Boston University, MA.

SATURDAY MORNING, APRIL 4, 1998

SESSION 24: GRANARY-MARKET ST.

*HUMAN BIOLOGICAL VARIATION V: BIOLOGICAL VARIATION AND POPULATION ORIGINS IN THE AMERICAS AND AUSTRALIA. SYMPOSIUM.*

This symposium reports recent findings and approaches to understanding dispersed American and Australasian populations that may be peripheral in some geographic sense but that allow us to address central questions concerning variation in past and present *Homo sapiens*.

*Organizer and*

*Chair:* R.L. Hall, Oregon State University, Corvallis.

- 8:00 AM A 25-year update on T. Dale Stewart's 'Perspectives on problems of early man common to America and Australia.' R.L. Hall, Oregon State University, Corvallis.
- 8:15 Evolutionary affinities of aboriginal Australian and Papua New Guinean populations: A comparison of mitochondrial, HLA, and Y chromosome genetic data. A.J. Redd, M. Stoneking, Pennsylvania State University, University Park.
- 8:30 Genetic associations across the Bering Strait: Continuities and discontinuities. T.G. Schurr, J.T. Lell, Emory University, Atlanta, GA, R.I. Sukernik, E.B. Starikovskaya, Institute of Cytology and Genetics, Novosibirsk, D.C. Wallace, Emory University, Atlanta, GA.
- 8:45 Biocultural dynamics of contemporary colonizing populations: Black Caribs of Central America. M.H. Crawford, University of Kansas, Lawrence.

SATURDAY, APRIL 4, 1998

SESSION 24 / SESSION 25

- 9:00 Putting skeletal variation to work—provenancing Australian aboriginal remains. C.M. Bennett, C. Pardoe, South Australian Museum, Adelaide, SA.
- 9:15 The value of postcranial variation in studies of modern *Homo sapiens*: An Australian focus. D.A. Donlon, University of Sydney, Australia.
- 9:30 Potential early prehistoric human remains from Jalisco, Mexico: A revised assessment. J.D. Irish, University of New Mexico, Albuquerque, J.E. Lobdell, University of New Mexico, S.D. Davis, USDA Forest Service, Sitka, AK, F.A. Solozano Barreta, Museo Regional de Guadalajara, Instituto Nacional de Antropología e Historia, Guadalajara, Jalisco, Mexico.
- 9:45 INTERMISSION
- 10:00 Lapa Vermelha IV Hominid 1: Morphological affinities of the earliest known American. W.A. Neves, Instituto de Biociencias, Universidade de São Paulo, Brazil, A. Prous, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, J.F. Powell, E.G. Ozolins, University of New Mexico, Albuquerque.
- 10:15 How many populations of early North Americans were there? R.L. Jantz, University of Tennessee, Knoxville, D.W. Owsley, Smithsonian Institution, Washington, DC.
- 10:30 Dental diversity of early New World populations: Taking a bite out of the tripartite model. J.F. Powell, University of New Mexico, Albuquerque, W.A. Neves, Instituto de Biociencias, Universidade de São Paulo, Brazil.
- 10:45 Discussion.

#### SESSION 25: SEASONS SOUTH

##### *PRIMATES V: PRIMATE BEHAVIOR. CONTRIBUTED PAPERS.*

- Chair:* L. L. Taylor, University of Miami, Coral Gables, FL.
- 8:00 AM The effect of reproductive seasonality and the absence of rank effect on scent marking behavior in naturally occurring adult male ringtailed lemurs (*Lemur catta*). L. Gould, Okanagan University College, British Columbia, Canada.
- 8:15 Variability in the cathemeral activity cycle of two lemurid primates at Ampijoroa, northwest Madagascar. M.A. Rasmussen, Duke University, Durham, NC.
- 8:30 Behavior and reproduction in aged lemurs. L.L. Taylor, University of Miami, Coral Gables, FL.
- 8:45 Androgen-behavior interactions in free-ranging female *Propithecus verreauxi*. D.K. Brockman, Duke University, Durham, NC, P.L. Whitten, H. Beaupre, Emory University, Atlanta, GA.
- 9:00 Variations in resource distribution and abundance as factors affecting the feeding ecology of *Cebus capucinus*. A.C. Yannopoulos, University of Illinois, Urbana.

SATURDAY, APRIL 4, 1998

SESSION 25 / SESSION 26

- 9:15 Mating behavior in wild tufted capuchins (*Cebus apella nigratus*) in Brazil's Atlantic forest. J.W. Lynch, University of Wisconsin, Madison.
- 9:30 Preliminary field study of positional behavior and habitat preference in *Callimico goeldii*. P.A. Garber, J.A. Rehg, University of Illinois, Urbana.
- 9:45 Survey of endangered monkeys in the forest reserves of eastern Cote d'Ivoire. W.S. McGraw, New York College of Osteopathic Medicine, Old Westbury.
- 10:00 INTERMISSION
- 10:15 Topographic effects on measures of monkey habitat-use in a mountainous study site in Japan. D.S. Sprague, University of Tsukuba, Japan.
- 10:30 A modest reduction in dietary fats is associated with increased aggression in stump-tailed macaques (*Macaca arctoides*). J.R. Kaplan, V. Williamson, Wake Forest University, Winston-Salem, NC.
- 10:45 Relation of ecogeographic variation in social structure to serum testosterone in vervet monkeys: A primate test of the challenge hypothesis. P.L. Whitten, Emory University, Atlanta, GA, T.R. Turner, University of Wisconsin, Milwaukee, C.J. Jolly, New York University, NY.
- 11:00 Taxon-specific reactions to trapping among Ethiopian baboons. C.J. Jolly, New York University, NY, J.E. Phillips-Conroy, Washington University School of Medicine, St. Louis, MO.
- 11:15 A field investigation into the behavioral and food processing function of the cercopithecine cheek pouch. J.E. Lambert, University of Florida, Gainesville.
- 11:30 Play as a developmental process. P. Dolhinow, University of California, Berkeley.

#### SESSION 26: SEASONS NORTH

##### *SKELETAL BIOLOGY IV: THREE-DIMENSIONAL IMAGING AND STEREOLOGICAL MODELING OF HUMAN REMAINS. SYMPOSIUM.*

Recent advances in computer tomography have made accurate three-dimensional rendering of human remains possible. These techniques offer the possibilities of viewing, measuring, and interpreting human remains—especially skeletal—in a non-destructive or noninvasive way. Generated images may be stored and used for future study, even though the remains themselves are inaccessible. It is now possible to generate accurate, solid full-scale polymer models of remains based on CT-scan data. Called stereolithography, this process has been used in several instances to produce replications where direct access to actual specimens was not possible. The symposium presents these techniques, especially those relevant to physical anthropologists.

##### *Organizers*

*and Chairs:* N. Lynnerup, University of Copenhagen, Denmark, and B. Frohlich, Smithsonian Institution, Washington, DC.

- 8:15 AM The use of computerized tomography in identifying human remains in unexcavated burials. B. Frohlich, Smithsonian Institution, Washington, DC, B. Falkowski, Siemens Medical Systems, Inc., Training and Development Center, Cary, NC, N. Lynnerup, University of Copenhagen, Denmark.
- 8:30 Stereolithographic reconstruction of fossil hominid skulls. H. Seidler, G. Weber, W. Recheis, D. zur Nedden, Institute of Human Biology, University of Vienna, Innsbruck University Hospital, Austria.
- 8:45 Non-destructive computerized tomographic investigation of a saponified body from the late 18th century. D.R. Hunt, B. Frohlich, National Museum of Natural History, Smithsonian Institution, Washington, DC.
- 9:00 Virtual endoscopic examinations of the Tyrolean Iceman. D. zur Nedden, W. Recheis, H. Seidler, Department of Radiology II, Innsbruck University Hospital, Institute of Human Biology, University of Vienna, Austria.
- 9:15 Skull reconstruction by stereolithography and non-invasive archaeology of 7000 year-old human remains. N. Lynnerup, H. Hjalgrim, University of Copenhagen, Denmark.
- 9:30 The application of computed tomography to paleoneurology: An example from the study of brain evolution in fossil Cetaceans. L. Marino, Emory University, Atlanta.
- 9:45 INTERMISSION
- 10:00 Real-time visualization of computed tomography datasets in anthropology. W. Recheis, H. Seidler, D. zur Nedden, Department of Radiology II, Innsbruck University Hospital, Institute of Human Biology, University of Vienna, Austria.
- 10:15 Electronically aided preparation of fossilized skulls: Medical imaging techniques and algorithms as an innovative tool in paleoanthropological research. H. Prossinger, G. Weber, H. Seidler, W. Recheis, R. Ziegler, D. Zur Nedden, Institute of Human Biology, University of Vienna, Department of Radiology II, Innsbruck University Hospital, Austria.
- 10:30 'Virtual Anthropology'—Methodological aspects of measurements. G.W. Weber, W. Recheis, H. Seidler, T. Scholze, University of Vienna, Department of Radiology, Innsbruck University Hospital, Austria.
- 10:45 Recording visual information with digital images. F. Mintzer, J. Christensen, F. Giordano, IBM Watson Research Center, Yorktown Heights, NY.
- 11:00 Using computer technology for 3D visualization and delivery of natural history objects. C.C. Hansen, National Museum of Natural History, Smithsonian Institution, Washington, DC.
- 11:15 Discussion.

## SESSION 27: THREE SEASONS

## PALEOANTHROPOLOGY VI: HOMINID EVOLUTION. CONTRIBUTED PAPERS.

- Chair:* B. Wood, George Washington University, Washington, DC.
- 8:00 AM New data about the orientation of the infraorbital surfaces in Neanderthals and anatomically modern humans. B. Maureille, F. Houet, URA 376 CNRS, Université Bordeaux I, France.
- 8:15 The significance of the anterior mastoid tubercle in the phylogeny of middle to late Pleistocene *Homo*. M.L. Chang, University of Pennsylvania, Philadelphia.
- 8:30 Unique Neandertal noses: Variation in the internal morphology of the nose. M.S. Murphy, University of Pennsylvania, J. Monge, University of Pennsylvania, Bryn Mawr College, A. Mann, University of Pennsylvania.
- 8:45 Breathing the air in the later Pleistocene: Examination of nasal complex morphology in the Broken Hill and Gibraltar 1 crania. S. Marquez, P.J. Gannon, J.S. Reidenberg, City University of New York, J.T. Laitman, Mount Sinai School of Medicine, NY.
- 9:00 The derived mandible of *Homo neanderthalensis*. Y. Rak, Tel-Aviv University Medical School, Israel.
- 9:15 The hypoglossal canal and the origins of human vocal behavior. R.F. Kay, M. Cartmill, M. Balow, Duke Medical Center, Durham, NC.
- 9:30 3-D coordinate analysis of the Kebara 2 Neandertal pelvis. T.D. Weaver, R.G. Franciscus, C.D. Karlin, E.A. Burson, K.A. Gust, Stanford University, CA.
- 9:45 Neandertal energetics and foraging efficiency. M. Sorensen and W.R. Leonard, University of Florida, Gainesville.
- 10:00 INTERMISSION
- 10:15 Lower limb skeletal structural adaptation in Upper Paleolithic and Mesolithic Europeans. B. Holt, University of Missouri, Columbia.
- 10:30 Body mass estimation in Olympic athletes and Pleistocene *Homo*. C.B. Ruff, Johns Hopkins University School of Medicine, Baltimore, MD, E. Trinkaus, Washington University, St. Louis, MO, T.W. Holliday, University of Central Florida, Orlando.
- 10:45 Postcranial evidence for the origin of modern humans. O.M. Pearson, Rutgers University, New Brunswick, NJ.
- 11:00 Patterns of variation within two samples of south-central European Neandertals. J.C.M. Ahern, J.D. Hawks, S.-H. Lee, University of Michigan, Ann Arbor.
- 11:15 Morphological affinities of European Upper Paleolithic and modern Holocene populations. B.A. Schumann, Florida Atlantic University, Boca Raton.



SATURDAY, APRIL 4, 1998

SESSION 27 / SESSION 28

- 11:30 The Mousterian human remains from Zafarraya (Andalucia, Spain). J.J. Hublin, UMR 152 of CNRS, Paris, E. Trinkaus, Washington University, St. Louis, MO, V.H. Stefan, University of New Mexico, Albuquerque.
- 11:45 On the non-clinal nature of human cognitive capabilities. C.L. Brace, University of Michigan, Ann Arbor.

SESSION 28: HARVEST-SMOKEHOUSE

*GENETICS III: GENETICS, POPULATION GENETICS, MOLECULAR BIOLOGY. POSTERS.*

*Chair:* R. Deka, University of Pittsburgh, PA.

*Times:* 8:00-8:30 AM Poster set-up.  
8:30-10:00 AM Authors of even-numbered posters present for questions.  
10:30 AM-12:00 PM Authors of odd-numbered posters present for questions.  
12:00-12:30 PM Poster take-down.

1. Ethnicity and gene flow in Limon, Costa Rica. L. Madrigal, B. Ware, University of South Florida, Tampa.
2. The genetic structure of Hueyapan, Puebla, Mexico. S. Puppala, M.H. Crawford, University of Kansas, Lawrence.
3. Heritability of bone mineral density in young to middle-aged adults. B. Towne, E.W. Demerath, L.M. Maynard, A.F. Roche, R.M. Siervogel, Wright State University School of Medicine, Dayton, OH.
4. Mismatch distribution of mtDNA may not reveal recent human population expansions. J. Hawks, University of Michigan, Ann Arbor.
5. Mitochondrial DNA variation of ancient Aleuts. M.G. Hayes, University of Utah, Salt Lake City.
6. Short tandem repeats and ancient populations: Some methodological and interpretive difficulties when working with ancient DNA. J.C. Dudar, S.R. Saunders, McMaster University, Hamilton, Ontario, J.S. Wayne, McMaster University, Hamilton, Ontario.
7. Radiation and evolution of macaques in the Indo-Malay region. B.J. Evans, J.C. Morales, D.J. Melnick, Columbia University, New York.
8. Y chromosome variation in *Pan*. A.C. Stone, R. Bonner, University of Arizona, Tucson, H. Ostrer, New York University Medical Center, NY, M. Hammer, University of Arizona, Tucson.
9. The distribution of an insertion/deletion polymorphism in the Collagen 1 gene (COL1A2) and a VNTR in the dopamine transporter gene (DAT1) in human populations. R.J. Mitchell, S. Howlett, L. Wilcox, La Trobe University, Melbourne, Australia, J. McComb, M.H. Crawford, University of Kansas, Lawrence, K.S. Schanfield, M.S. Schanfield, AGTC, Denver, CO.
10. MtDNA variation among the Western Anasazi. S.W. Carlyle, University of Utah, Salt Lake City.



11. Mitochondrial DNA variation in Santa Cruz Islanders. K. Green, University of Michigan, J. Friedlaender, Temple University, D.A. Merriwether, University of Michigan.
12. Mitochondrial variation in the Nasioi of Bougainville. K.L. Heckman, University of Michigan, J. Friedlaender, Temple University, D.A. Merriwether, University of Michigan.
13. Mitochondrial DNA D-loop sequence variation within and between Yanomami villages. D.A. Merriwether, K. Green, University of Michigan, Ann Arbor, D.E. Crews, Ohio State University, Columbus, J.V. Neel, University of Michigan, Ann Arbor.

## SESSION 29: HARVEST-SMOKEHOUSE

*PRIMATES VI: PRIMATE BIOLOGICAL VARIATION. POSTERS.*

*Chair:* L. Digby, Duke University Medical Center, Durham, NC.

*Times:* 8:00-8:30 AM Poster set-up.  
 8:30-10:00 AM Authors of even-numbered posters present for questions.  
 10:30 AM-12:00 PM Authors of odd-numbered posters present for questions.  
 12:00-12:30 PM Poster take-down.

14. The serine hydroxymethyltransferase pseudogene, SHMT-psl: A unique marker in the genome of the Order Primates. E.J. Devor, University of Iowa, Iowa City.
15. Chewing rates and feeding styles in insectivorous primates and bats. P. Lemelin, E.R. Dumont, Northeastern Ohio Universities College of Medicine, Rootstown.
16. Exudate feeding and interspecific variability in postcanine size among Callitrichidae. D. Johnson, Duke University, Durham, NC.
17. Variation in emergence of deciduous dentition in a group of captive infant gorillas (*Gorilla gorilla*). A. Bellisari, Wright State University, Dayton, OH.
18. Presence of dental enamel hypoplasia in wild-shot chimpanzees (genus *Pan*) and gorillas (genus *Gorilla*). M.M. Stottlemire, University of Illinois, Urbana.
19. Modeling primate occlusal morphology in three dimensions using Geographic Resources Analysis Support System software. L.F. Zuccotti, M.D. Williamson, W.F. Limp, P.S. Ungar, University of Arkansas, Fayetteville.
20. Dental eruption sequence among colobine primates. K. Harvati, Lehman College and the Graduate School, CUNY/NYCEP, New York.
21. Canine form in *Cebus*. T.J. Masterson, James Madison University, Harrisonburg, VA.
22. Physical properties of foods in *Alouatta palliata*. P.W. Lucas, Hong Kong University, M.F. Teaford, Johns Hopkins University, Baltimore, MD, P.S. Ungar, University of Arkansas, Fayetteville, K.E. Glander, Duke University, Durham, NC.

23. Craniodental indicators of body weight in *Galagoides demidovii* and *Tarsius bancanus*. F.P. Cuzzo, University of Colorado, Boulder.
24. Patterns of variation in the platyrrhine cranio-orbital region: Implications for reconstructing the platyrrhine morphotype. W.D. Moore, Southern Illinois University, Carbondale.
25. Facial flexion and craniometric variation in the platyrrhine genus *Alouatta*. J.R. Miller, D.R. Begun, University of Toronto, Canada.
26. Quantification of facial variation in the Papionini (Cercopithecinae, Cercopithecidae). S.R. Frost, Lehman College, City University of New York, New York Consortium in Evolutionary Primatology (NYCEP), L.F. Marcus, City University of New York Graduate School, NYCEP, Queens College, American Museum of Natural History, E. Delson, Lehman College, City University of New York Graduate School, NYCEP, American Museum of Natural History, D. Reddy, Radio-Logic, Inc.
27. Morphological distinctiveness of Nigerian gorilla crania. R.M. Stumpf, J.G. Fleagle, W.L. Jungers, State University of New York, Stony Brook, J.F. Oates, Hunter College, City University of New York, C.P. Groves, Australia National University, Sydney.
28. Cranial base angulation and facial growth in *Homo*: A comparative longitudinal and intertaxonomic study. R.C. McCarthy, Rutgers University, New Brunswick, NJ.
29. Cerebrospinal fluid concentrations of large neutral amino acids and monoamine metabolites in *Macaca mulatta*: Effects of single high protein meals and venous tyrosine infusions. M.A. Grimes, Pennsylvania State University, University Park, J.L. Cameron, J.D. Fernstrom, University of Pittsburgh, PA.
30. A systematic approach to characterizing primates: A three-way ratio of cranial sinus area. S.T. Slemmer, University of Tennessee, Knoxville.
31. Life histories of female mantled howling monkeys in Costa Rica: Weight, age, and status. E.L. Zucker, Loyola University, New Orleans, LA, M.R. Clarke, Tulane University, New Orleans, LA, K.E. Glander, Duke University Primate Center, Durham, NC.
32. The balance of power in a pair. R.J. Lewis, Duke University, Durham, NC.
33. Growth of skeletal components in the squirrel monkey (*Saimiri sciureus boliviensis*): A longitudinal study. H.M. Pucciarelli, M.C. Mune, A.B. Orden, E.E. Oyhenart, CIGIBA, Fac. Cs. Veterinarias, UNLP, La Plata, Argentina.
34. Functional variation in the vertebral morphology of prosimians. C.V.M. Simons, L.J. Shapiro, University of Texas, Austin.
35. Locomotion and forelimb morphology in snub-nosed monkeys (Colobinae: *Rhinopithecus*). D. Su, University of California, Berkeley, N.G. Jablonski, California Academy of Sciences, San Francisco.

**SATURDAY, APRIL 4, 1998**

**SESSION 29 / SESSION 30**

- 36. Heterochrony and size reduction in the dentition and hands of Callitrichinae. J.C. Bicca-Marques, University of Illinois, Urbana, S.A. Wojciechowski, Brookfield Zoological Park, Brookfield, IL, S.R. Leigh, University of Illinois, Urbana.
- 37. Sexual dimorphism in the postcranium of callitrichid primates. S.M. Ford, L.C. Davis, Southern Illinois University, Carbondale.
- 38. Patterns of sexual dimorphism in platyrrhine limb bone diaphyses. J.A. Runestad, Western Illinois University, Macomb, K.E. Glander, Duke University, Durham, NC.
- 39. Comparative dimensions of hands in Hylobatidae and Pongidae: A preliminary report. K.A. Nichols, University of Colorado, Boulder.
- 40. Force distribution on the digits during knuckle-walking. R.E. Wunderlich, Pennsylvania State University, University Park, W.L. Jungers, State University of New York, Stony Brook.
- 41. Morpheus et al.: Cross-platform software for morphometric research. D.E. Slice, State University of New York, Stony Brook.

**SATURDAY AFTERNOON, APRIL 4, 1998**

**SESSION 30: GRANARY-MARKET ST.**

*DENTAL ANTHROPOLOGY II: CONTRIBUTED PAPERS.*

- Chair:* J. Irish, University of New Mexico, Albuquerque.
- 1:00 PM Ukraine Neolithic cemeteries: Dental anthropological analysis of twelve sites. A.M. Haeussler, Arizona State University, Tempe.
  - 1:15 Teeth as tools in the Late PPNB population from Nevali Cori (Turkey). W.-R. Teegen, M. Schultz, Zentrum Anatomie, University of Göttingen, Germany.
  - 1:30 Dental anthropology of prehistoric Sardinians (V-I millenium B.C.): Oral pathologies, metric and non-metric traits. A. Coppa, A. Cucina, R. Vargiu, Universita di Roma 'La Sapienza', Italy, G.C. Cosseddu, G. Floris, R. Floris, Universita di Cagliari, Italy, M. Lucci, Universita di Sassari, Italy.
  - 1:45 Genetic markers as indicators of familial relationships at Spiro Mounds, Oklahoma. A.T. Mayes, University of Colorado, Boulder.
  - 2:00 Neolithic collapse in the Levant viewed from dental enamel hypoplasia. S.A. Al-Abbasi, Arizona State University, Tempe, I. Sarie, Palestinian Department of Antiquities, Ramallah via Israel.
  - 2:15 Dental morphological evidence for population affinities of the Iberian Peninsula (100 BC-1300 AD) and Western Balearic Islands. S.E. Bailey, C.G. Turner II,

- Arizona State University, Tempe, P.H. Du Souich, Laboratorio de Antropologia, Facultad de Medicina, Granada, Spain.
- 2:30 Colonization and microevolution in the Rio Verde Valley, Oaxaca, Mexico. A.F. Christensen, Vanderbilt University, Nashville, TN.
- 2:45 How much is too much? Examining the effect of dental wear on studies of dental morphology. S.E. Burnett, Arizona State University, Tempe, J.D. Irish, University of New Mexico, Albuquerque, M.R. Fong, Arizona State University, Tempe.
- 3:00 A reassessment of the relationship between dental wear and subsistence in the Levant. M.M. Glantz, University of Pennsylvania, Philadelphia.
- 3:15 INTERMISSION
- 3:30 The anthropology of antemortem tooth loss. S.W. Hillson, University College London, UK.
- 3:45 Enamel microdefects in a modern sample. L.M. Mifsud, M.K. Marks, University of Tennessee, Knoxville.
- 4:00 Multivariate probit analysis of deciduous dental emergence. L.W. Konigsberg, University of Tennessee, Knoxville, D.J. Holman, Pennsylvania State University, University Park, R.E. Jones, University of Wisconsin, Madison.
- 4:15 Perikymata counts in two modern human sample populations. M. Yuan, R. Holloway, L. Moss-Salentijn, Columbia University, NY, M. Yoder, New York University, NY, D. Broadfield, City University of New York, NY.
- 4:30 Linear enamel hypoplasia and life history in Cayo Santiago rhesus monkeys. D. Guatelli-Steinberg, University of Oregon, Eugene.
- 4:45 The lower third molar and the hypoconulid in Asian colobines. M.S. Willis, Atlanta, GA, D.R. Swindler, Edmonds, WA.

## SESSION 31: SEASONS SOUTH

*PALEOANTHROPOLOGY VII: PRIMATE EVOLUTION. CONTRIBUTED PAPERS.*

- Chair:* T.M. Cole III, University of Missouri, Kansas City.
- 1:00PM Origin of Anthroidea: Dental evidence and the recognition of earliest anthropoids in the fossil record. E.R. Miller, Duke University Primate Center, Durham, NC, G.F. Gunnell, University of Michigan, Ann Arbor, E.L. Simons, Duke University Primate Center, Durham, NC.
- 1:15 The evolution of anthropoid jaw loading and kinematic patterns. M.J. Ravosa, Northwestern University Medical School, Chicago, IL, Field Museum of Natural History, Chicago, S.A. Islam, Northwestern University Dental School, Chicago, IL.
- 1:30 Fossil primates and associated fauna from 1997 excavations at the middle Miocene site of Maboko Island, Kenya. S.N. Gitau, B.R. Benefit, M.L. McCrossin, T.Roedl, Southern Illinois University, Carbondale.

- 1:45 A mandible of *Mabokopithecus clarki* sheds new light on oreopithecoid evolution. B.R. Benefit, S.N. Gitau, M.L. McCrossin, A.K. Palmer, Southern Illinois University, Carbondale.
- 2:00 Functional and phylogenetic analysis of the distal radius of *Kenyapithecus*, with comments on the origin of the African great ape and human clade. M.L. McCrossin, B.R. Benefit, S.N. Gitau, Southern Illinois University, Carbondale.
- 2:15 The phylogenetic affinities of *Otavipithecus namibiensis*: A parsimony analysis of hominoid mandibular morphology. M. Singleton, Washington University, St. Louis, MO.
- 2:30 Paleoecological implications of dental microwear analysis for the middle Miocene primate fauna from Maboko Island, Kenya. A.K. Palmer, B.R. Palmer, B.R. Benefit, M.L. McCrossin, S.N. Gitau, Southern Illinois University, Carbondale.
- 2:45 Evolutionary stasis of maxillary sinus size in Hominoidea. T.C. Rae, University of Durham, UK, T. Koppe, Okayama University School of Dentistry, Japan.
- 3:00 *Proconsul*—Thick or thin? A study of enamel thickness and its significance. D.G. Gantt, J.A. Rafter, Georgia Southern University, Statesboro.
- 3:15 INTERMISSION
- 3:30 Dental microwear in *Griphopithecus alpani*. T.C. King, Natural History Museum, London, UK.
- 3:45 Encephalization and endocranial morphology in *Dryopithecus brancoi*: Implications for brain evolution in early hominids. L. Kordos, Geological Museum of Hungary, Budapest, D.R. Begun, University of Toronto, Canada.
- 4:00 Sexual dimorphisms and species composition of the Lufeng dental samples. K.E. Juell, S.C. Josephson, University of Utah, Salt Lake City, J. Kelley, University of Illinois, Chicago.
- 4:15 Non-competitive replacement of apes by monkeys in the late Miocene of Eurasia. J.L. Kelley, University of Illinois, Chicago.
- 4:30 Discovery of new primate fossils from Bone Cave, Ngamiland, Botswana. B.A. Williams, Duke University, Durham, NC, D.M. Waddle, Colorado State University, Fort Collins, C.F. Ross, State University of New York, Stony Brook, M. Gabadirwe, George Washington University, Washington, DC.
- 4:45 New hands and feet for an old lemur (*Archaeolemur*). W.L. Jungers, R.E. Wunderlich, State University of New York, Stony Brook, P. Lemelin, Northeastern Ohio Universities College of Medicine, Rootstown, OH, L.R. Godfrey, University of Massachusetts, Amherst, D.A. Burney, Fordham University, Bronx, NY, E.L. Simons, P.S. Chatrath, Duke University Primate Center, Durham, NC, H.F. James, Smithsonian Institution, Washington, DC.

## SESSION 32: SEASONS NORTH

*HUMAN BIOLOGICAL VARIATION VI: DEMOGRAPHY AND REPRODUCTION,  
CONTRIBUTED PAPERS.*

- Chair:* L. E. Leidy, University of Massachusetts, Amherst.
- 1:00 PM Rediscovering turbulence—Historical demography in an Austrian village. H. Wilfing, A. Mullner, University of Vienna, Austria.
- 1:15 Using stimulation to detect potential effects of apparently minor social responses to an epidemic. L. Sattenspiel, A. Mobarry, University of Missouri, Columbia, D.A. Herring, McMaster University, Hamilton, Ontario.
- 1:30 Birth weight and gestational age: An analysis using mixture models. T.B. Gage, State University of New York, Albany.
- 1:45 Couple conflict, reproductive strategy, and fertility in three Micronesian island populations. A.A. Brewis, University of Georgia, Athens.
- 2:00 Accessory eggs, follicular atresia, and the evolution of human menopause. L.E. Leidy, University of Massachusetts, Amherst.
- 2:15 Twin cultures in biosocial perspective. C.M. Hill, H.L. Ball, University of Durham, UK.
- 2:30 Attachment and paternal investment in divorced fathers. L.B. Slater, University of Washington, Seattle.
- 2:45 Fecundability and husband's age among the Dogon of Mali. B.I. Strassman, University of Michigan, Ann Arbor, J. Warner, University of Michigan, Ann Arbor.
- 3:00 INTERMISSION
- 3:15 Morbidity, pregnancy outcomes and fitness costs of sedentarization among pastoralist women in Uganda. S.J. Gray, University of Kansas, Lawrence, I.L. Pike, Ohio State University, Columbus.
- 3:30 Reproductive hormones and pregnancy-related sickness in a prospective study of Bangladeshi women. K.A. O'Connor, D.J. Holman, E. Brindle, S.H. Barsom, J.W. Wood, Pennsylvania State University, University Park.
- 3:45 Reproduction and ecology in Provincia Aroma, Bolivia: Fecundity of women with low levels of salivary progesterone. G.R. Bentley, University of Cambridge, UK, V.J. Vitzthum, University of California, Riverside, E. Caceres, H. Spielvogel, Instituto Boliviano de Biología de Altura, La Paz, K. Crone, L. May, R.T. Chatterton, Northwestern University, Evanston.
- 4:00 Nursing patterns, maternal energetics and postpartum fertility among Tobas of Formosa, Argentina. C.R. Valeggia, P.T. Ellison, Peabody Museum, Harvard University, Cambridge, MA.

- 4:15 High altitude inhibits stimulation of uterine artery growth during pregnancy. L.C. Rockwell, M. White, L.E. Keys, S. Zamudio, L.G. Moore, University of Colorado Health Sciences Center, Denver.

## SESSION 33: THREE SEASONS

*SKELETAL BIOLOGY V: CONTRIBUTED PAPERS.*

- Chair:* C. Raemsch, Hartgen Archeological Associates, Inc., Troy, NY.
- 1:00 PM The osteological paradox: Bioarchaeological evidence from Arkansas. K.A. Murray, University of Arkansas, Fayetteville.
- 1:15 Everyone's doing the population shuffle: Prehistoric population movement in west-central Illinois. D.W. Steadman, Iowa State University, Ames.
- 1:30 Variation between and within three Chiribaya populations: Anthropometric and dietary evidence. P.D. Tomczak, University of New Mexico, Albuquerque, C.M. Malcolm, University of Chicago, IL, J.E. Buikstra, University of New Mexico, Albuquerque.
- 1:45 Paleodemography of the Poole-Rose Ossuary. R.G. Tague, M. Manhein, H. McKillop, Louisiana State University, Baton Rouge.
- 2:00 Interaction, social change, and biology at the Larson site. C.A. Raemsch, Hartgen Archeological Associates, Inc., Troy, NY.
- 2:15 Fertility and subadult mortality at Semna South, Sudanese Nubia. A. Alvrus, Arizona State University, Tempe.
- 2:30 The skeletal biology of the lower Mississippi River valley. S.N. Byers, University of New Mexico, Albuquerque.
- 2:45 The age-at-death distribution of Indian Knoll: How should it be estimated? N.P. Herrmann, University of Tennessee, Knoxville.
- 3:00 INTERMISSION
- 3:15 Anthropometric variation among the Sioux and Assinboine. D.J. Wescott, R.L. Jantz, University of Tennessee, Knoxville.
- 3:30 Biological affinities of the Buhl Woman: The oldest Paleoindian skeleton. T.W. Fenton, University of Arizona, Tucson, A.R. Nelson, University of Michigan, Ann Arbor.
- 3:45 An initial craniometric examination of the origins and inter-regional impacts of Oxus civilization populations from the North Bactrian Oasis of central Asia. B.E. Hemphill, Vanderbilt University, Nashville, TN.
- 4:00 Craniometric variation and homogeneity in prehistoric Rapa Nui (Easter Island) regional populations. V.H. Stefan, University of New Mexico, Albuquerque.
- 4:15 Craniofacial form and regional population affinities: A comparative approach to Paleo-Indian origins. R. Nelson, University of Michigan, Ann Arbor.

SATURDAY, APRIL 4, 1998

SESSION 33

- 4:30            Teotihuacan at Kaminaljuju? A chemical test of state representation using oxygen isotope ratios. C.D. White, M.W. Spence, F. Longstaffe, University of Western Ontario, London.
- 4:45            Prelude to paleodiet: Diagenesis among early Holocene skeletons from North India. H. Vallianatos, University of Oregon, Eugene.



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